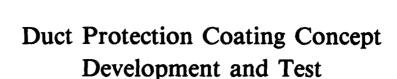


AEDC-TR-92-23 APPENDIX D, VOL. I





Appendix D, Volume I: Test Specimen Fabrication, Conditioning, and Testing Documentation

C. David Newlander
Mission Research Corporation
Costa Mesa, CA 92626

January 1993



Final Report for February 1992

Approved for public release; distribution is unlimited.



ARNOLD ENGINEERING DEVELOPMENT CENTER
ARNOLD AIR FORCE BASE, TENNESSEE
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UNITED STATES AIR FORCE

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### APPROVAL STATEMENT

This report has been reviewed and approved.

PAUL LACASSE, Capt, CF

Propulsion Division

Directorate of Technology

**Deputy for Operations** 

Approved for publication:

FOR THE COMMANDER

Keith of Kushma

KEITH L. KUSHMAN Director of Technology

**Deputy for Operations** 

REPORT DO	CUMENTATION PA	GE	Form Approved					
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Costa Mesa, CA 92626 7. PERFORMING ORGANIZATION NAME( Mission Research Corpo 3505 Cadillac Avenue, B Costa Mesa, CA 92626		8. PERFORMING ORGANIZATION REPORT NUMBER  AEDC-TR-92-23  Appendix D, Vol. I						
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13. ABSTRACT (Maximum 200 words) The overall object cleaning/preparation a interior of the AEDC Ertypes of cleaning techemical approaches. corrosion-free, clean techniques are strongly Water blasting is an accexpensive equipment, a	nd corrosion resistantifications  Iniques acceptable to a supply and or surfaces for coating discouraged and baseptable technique, but the supply and the su	nt protective po lity ferrous metal to the AEDC wer abrasive blasting g steel substrate sically "outlawed" at requires a high	air supply ducts. The re basically limited to g is used to produce es. These particular " at the AEDC facilities.					
14. SUBJECT TERMS coating steel substrates	polymer coating	supply duct	15. NUMBER OF PAGES 248  16. PRICE CODE					

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### MRC-COM-R-92-0315

# DUCT PROTECTION COATING CONCEPT DEVELOPMENT AND TEST

CONTRACT: F40600-89-C-0002

**FINAL TECHNICAL REPORT (CDRL A002)** 

APPENDIX D: TEST SPECIMEN FABRICATION, CONDITIONING, AND TESTING DOCUMENTATION

PART I: SETS 11 Through I-21

15 February 1992

### Submitted to:

Arnold Engineering Development Center
Arnold Air Force Station, Tennessee 37389-5000
ATTN: Captain Paul LaCasse/DOTR
Dowe Jones/PKP

### Submitted by:

Mission Research Corporation Survivable Structures Technologies Division 3505 Cadillac Avenue, Building H Costa Mesa, California 92626 C. David Newlander, Program Manager

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Set: 11 Sample: 4701 Comments:

Materials: A516-70 steel substrate, MEK, Original MARB (20 gm SR 240, 20 gm DC 6-2230, 20 gm Xylene, 0.08 gm 8% ZO, 14.8 gm Aluminum Powder).

	•••••••••		
Date	Action	Equip	Results/Comments
01/29/90	Solvent Wipe	-	MEK (Mill scale not removed)
	Coat with MARB	•	Brush on; 5 mils
	2 hr ● 487	0	Cure
	Test (Location 15)	٨	>950 psi (No Failure)
	Test (Location 16)	A	>950 psi (No Failure)
05/29/90	2 hr 0 150	Н	Humid/Dry
05/30/90	1 hr # 600	0	Dry
05/30/90	Test (Location 17)	٨	>800 psi (90% F)
05/31/90	5 hr 0 -100	С	•••••••••••••••••••••••••••••••••••••••
06/01/90	3 hr • 160	Н	
06/01/90	20 min 0 +25	Н	Center of Panel Blistered
06/01/90	Test (Location 18)	٨	>1000 psi
06/04/90	3 hr 0 600	C	

Set: 11 Sample: 4701 Comments: Page 2

Materials: A516-70 steel substrate, MEK, Original MARB (20 gm SR 240, 20 gm DC 6-2230, 20 gm Xylene, 0.08 gm 8% ZO, 14.8 gm Aluminum Powder).

Date	Action	Equip	Results/Comments
06/04/90	0.5 hr 0 -100	С	
06/05/90	4 hr 0 160	H	High Humidity; Paint Peeling
06/05/90	Test (Location 19)	٨	990 psi (45% F, 50% C, 5% A)
06/14/90	4 hr 0 600	0	Dry Heat
06/15/90	1 hr 0 150	Н	`
06/15/90	30 min 0 15	Н	Dry to Very Humid
6/15/90	1 hr 0 150	Н	Very Humid to Dry (Flaking - complete coating failure) 12 events

Sample: 5002-Top

Comments: 1 Dot

Materials: 50% HCl Acid; Zinc Clad II (West Mix)

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply ZnClad II		
04/05/90	2 hr 0 610	0	
04/09/90	Test (Location 2)	<b>A</b>	750 psi (A)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr 0 650	0	
04/23/90	2 hr 0 650	0	

Set: 13 Sample: 5002-Top Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix)

Date	Action	Equip	Results/Comments
04/26/90	Test (Location 3)	٨	>900 psi (No Failure), No Flaking Observed
04/27/90	2 hr 0 650	0	***************************************
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	
05/09/90	Test (Location 4)	٨	20 psi (100% C)
05/11/90	Test (Location 5)	Α	90 psi (95% C, 5% F)

Set: 13 Sample: 5002-Bottom Comments: 1 Dot

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Standard MARB

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply MARB	***********	Brush
04/04/90	Test (location 1)	٨	Cohesive Failure in Paint while Scribing
04/05/90	2 hr 0 615	0	***************************************
04/09/90	Test (Location 2)	٨	>900 psi (No Failure)
04/09/90	l hr 0 645		·
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	·
04/12/90	2 hr 0 683	0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	•••••••••••••••••••••••••••••••••••••••

Set: 13 Sample: 5002-Bottom Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Standard MARB

Date	Action	Equip	Results/Comments
04/17/90	2 hr 0 650	0	
04/23/90	2 hr 0 650	0	
04/26/9J	Test (Location 3)	٨	>900 psi (No Failure)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr • 650	0	
05/02/90	2 hr # 650	0	
05/09/90	Test (Location 4)	٨	150 psi (60% C, 40% ZnClad II)
05/11/90	Test (Location 5)	٨	100 psi (95% C - Zn/MALB Interface, 5% C - MALB)

Set: 13 Sample: 5003-Top Comments: 2 Dot

Materials: MEK; Zinc Clad II (West Mix); Standard MARB

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply MARB		Brush
04/04/90	Test (location 1)	٨	20 psi (100% C)
04/05/90	2 hr 0 615	0	
04/09/90	Test (Location 2)	٨	580 psi (100% Epoxy Failure)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	······································
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Set: 13 Sample: 5003-Top Comments: Page 2

Materials: MEK; Zinc Clad II (West Mix); Standard MARB

Date	Action	Equip	Results/Comments
04/17/90	2 hr 0 650	0	
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	400 psi (100% ZnII/Substrate)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	
05/09/90	Test (Location 4)	٨	50 psi (60% ZnClad II, 40% C)
05/11/90	Test (Location 5)	٨	<10 psi (100% C - Failed Very Early)

Sample: 5003-Bottom

Comments: 2 Dots

Materials: MEK; Zinc Clad II (West Mix)

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad II		
04/05/90	2 hr 0 615	0	
04/09/90	Test (Location 2)	٨	200 psi (100% A)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr 0 650	0	
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	Α	820 psi (100% A), Zinc Clad is Flaking

Set: 13 Sample: 5003-Bottom Comments: Page 2

Materials: MEK; Zinc Clad II (West Mix)

Date	Action	Equip	Results/Comments
04/27/90	2 hr 0 650	0	
05/01/90	2 hr 0 650	0	
05/02/90	2 hr <b>9</b> 650	0	
05/09/90	Test (Location 4)	٨	210 psi (85% ZnII, 15% C)
05/11/90	Test (Location 5)	Α	110 psi (40% Substrate, 60% C)

Set: 13

Sample: 5102

Comments: 3 Dot

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Date	Action	Equip	Results/Comments
03/30/90	Clean with Acid		
03/30/90	Wire Brush	*********	
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (location 1)	٨	90 psi (100% C in Aluminum Paint)
04/05/90	2 hr 0 615	Ö	
04/09/90	Test (Location 2)	٨	150 psi (100% C in Zinc Clad)
04/09/90	1 hr 0 645		***************************************
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	•••••••••••••••••••••••••••••••••••••••

Set: 13 Sample: 5102 Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Ename)

Date	Action	Equip	Results/Comments
04/17/90	2 hr 0 650	0	
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	O psi (Came off while Scribing - 30% C in Zinc Clad, 70% Paint/Zinc Clad
04/27/90	2 hr 0 650	0	
05/01/90	2 hr 0 650	0	,
05/02/90	2 hr 0 650	0	
05/09/90	Test (Location 4)	٨	<20 psi (100% Epoxy Failure)

## 13

# AEDC-TR-92-2

# NRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5103 Comments: 4 Dot

Materials: MEK; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		***************************************
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (location 1)	٨	50 psi (100% C in Paint)
04/05/90	2 hr ● 615	0	***************************************
04/09/90	Test (Location 2)	٨	75 psi (60% C in Zinc Clad, 40% Paint/Zinc Clad Interface)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	8	
04/11/90	2 hr • 645	0	
04/12/90	2 hr ● 683	0	***************************************
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	

Set: 13 Sample: 5103 Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Date	Action	Equip	Results/Comments
04/17/90	2 hr 0 650	0	
04/23/90	2 hr ● 650	0	
04/26/90	Test (Location 3)	٨	0 psi (100% Adhesion ZnII to Steel)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr ● 650	0	·
05/02/90	2 hr ● 650	Ō	
05/09/90	Test (Location 4)	٨	<20 psi (90% C to ZnII, 10% C in ZnII)
	Test (Location 5)	٨	100% Epoxy Failure

Set: 13

Sample: 5202

Comments: 5 Dot

Materials: 50% HCl Acid; Zinc Clad I

Date	Action	Eaula	
	verini	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Vire Brush		
03/30/90	Apply ZnClad I		
04/04/90	Test (Location 1)	A	100 psi (100% A)
04/05/90	2 hr 0 615	0	
04/09/90	Test (Location 2)	٨	200 psi (100% C)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	8	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr • 683	0 .	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr <b>9</b> 650	0	

Set: 13

Sample: 5202

Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad I

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester; B - Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	90 psi (100% C)
04/27/90	2 hr • 650	0	
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	,
05/09/90	Test (Location 4)	٨	200 ps1 (60% C, 40% A)
05/11/90	Test (Location 5)	A	900 psi (No Failure)

# 17

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5203 Comments: 6 Dot

Materials: MEK; Zinc Clad I

Date	Action	Fauta	
vale	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad I		***************************************
04/04/90	Test (Location 1)	A	10 psi (100% A)
04/05/90	2 hr • 615	0	`
04/09/90	Test (Location 2)	٨	75 psi (100% A)
04/09/90	l hr 0 645		***************************************
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	·
04/13/90	2 hr 0 675	0	***************************************
04/16/90	12 hr 0 -110	В	***************************************
04/17/90	2 hr 0 650	0	

Set: 13 Sample: 5203 Comments: Page 2

Materials: MEK; Zinc Clad I

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	220 psi (100% A - Subsurface Corrosion Visible, Lots of Flaking)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr ● 650	0	`
05/02/90	2 hr ● 650	. 0	`
05/09/90	Test (Location 4)	· A	700 psi (60% C, 40% A)
05/11/90	Test (Location 5)	A	400 psi (85% A, 10% C, 5% Epoxy)

Set: 13 Sample: 5302 Comments: 7 Dot

Materials: 50% HCl Acid; Nybco Bar-B-Q Black

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush	******	
03/30/90	Apply Bar-B-Q Black		Spray
04/04/90	Test (Location 1)	A	100 psi (50% A, 50% C)
04/05/90	2 hr 0 615	0	,
04/09/90	Test (Location 2)	A	800 psi (100% C)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr 0 650	0	

Set: 13 Sample: 5302 Comments: Page 2

Materials: 50% HCl Acid; Bar-B-Q Black

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	300 psi (100% C)
04/27/90	2 hr ● 650	0	
05/01/90	2 hr ● 650	0	
05/02/90	2 hr 0 650	0	
05/09/90	Test (Location 4)	٨	>900 psi (No Failure)
05/11/90	Test (Location 5)	٨	850 psi (75% C, 25% Epoxy)

Set: 13

Sample: 5303

Comments: 8 Dot

Materials: MEK; Nybco Bar-B-Q Black

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply Bar-B-Q Black		Spray
04/04/90	Test (Location 1)	٨	200 psi (67% A, 33% Epoxy)
04/05/90	2 hr <b>0</b> 615	0	`
04/09/50	Test (Location 2)	A	>900 psi (No Failure)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr <b>0</b> 645	0	
04/12/90	2 hr 🗣 683	0	
04/13/90	2 hr • 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr 0 650	0	

Set: 13 Sample: 5303 Comments: Page 2

Materials: MEK; Bar-B-Q Black

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	200 psi (90% C, 10% A)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	`
05/09/90	Test (Location 4)	Α	200 psi (100% C)
05/11/90	Test (Location 5)	Α	500 psi (95% A, 5% Epoxy)

Sample: 5402

Comments: 9 Dot

Materials: 50% HCl Acid; Sherwin-Williams Hi-Heat Spray Enamel

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (Location 1)	Α	50 psi (50% A, 50% C)
04/05/90	2 hr 0 615	0	
04/09/90	Test (Location 2)	٨	600 psi (100% C)
04/09/90	1 hr 0 645	~ • • • • • • • • • •	
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	. 0	
04/13/90	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr 0 650	0	

Set: 13 Sample: 5402 Comments: Page 2

Materials: 50% HCl Acid; Sherwin-Williams Hi-Heat Spray Ename]

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	600 psi (100% C)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	,
05/09/90	Test (Location 4)	٨	250 psi (100% C)
05/11/90	Test (Location 5)	A	200 psi (100% C)

Set: 13 Sample: 5403 Comments: 10 Dot

Materials: MEK; Sherwin-Williams Hi-Heat Spray Enamel

03/30/90 Detergent Wash 03/30/90 Wipe with MEK 03/30/90 Apply S/W Paint Spray 04/04/90 Test (Location 1) A 5 psi (100% C) 04/05/90 2 hr 0 615 0 04/09/90 Test (Location 2) A 600 psi (100% C) 04/09/90 1 hr 0 645 04/10/90 12 hr 0 -110 B 04/11/90 2 hr 0 683 0 04/12/90 2 hr 0 675 0	Date	Action	Equip	Results/Comments
03/30/90 Apply S/W Paint Spray  04/04/90 Test (Location 1) A 5 psi (100% C)  04/05/90 2 hr 0 615 0  04/09/90 Test (Location 2) A 600 psi (100% C)  04/09/90 1 hr 0 645  04/10/90 12 hr 0 -110 B  04/11/90 2 hr 0 645 0  04/12/90 2 hr 0 683 0	03/30/90	Detergent Wash		***************************************
04/04/90 Test (Location 1) A 5 psi (100% C)  04/05/90 2 hr 0 615 0  04/09/90 Test (Location 2) A 600 psi (100% C)  04/09/90 1 hr 0 645  04/10/90 12 hr 0 -110 B  04/11/90 2 hr 0 645 0  04/12/90 2 hr 0 683 0  04/13/90 2 hr 0 675 0	03/30/90	Wipe with MEK		
04/05/90 2 hr 0 615 0 04/09/90 Test (Location 2) A 600 psi (100% C) 04/09/90 1 hr 0 645 04/10/90 12 hr 0 -110 B 04/11/90 2 hr 0 645 0 04/12/90 2 hr 0 683 0 04/13/90 2 hr 0 675 0	03/30/90	Apply S/W Paint	*********	Spray
04/09/90 Test (Location 2) A 600 psi (100% C)  04/09/90 1 hr 0 645  04/10/90 12 hr 0 -110 B  04/11/90 2 hr 0 645 0  04/12/90 2 hr 0 683 0  04/13/90 2 hr 0 675 0	04/04/90	Test (Location 1)	A	5 psi (100% C)
04/09/90	04/05/90	2 hr 0 615	0	`
04/10/90	04/09/90	Test (Location 2)	٨	600 psi (100% C)
04/11/90  2 hr 0 645	04/09/90	1 hr 0 645		
04/12/90  2 hr 0 683	04/10/90	12 hr 0 -110	В	
04/13/90 2 hr 0 675 0	04/11/90	2 hr 0 645	0	
	04/12/90	2 hr 0 683	0	
04/16/90 12 hr • -110 B	04/13/90	2 hr 0 675	0	
	04/16/90	12 hr 0 -110	В	
04/17/90 2 hr 0 650 0	04/17/90	2 hr 0 650	0	

Set: 13 Sample: 5403 Comments: Page 2

Materials: MEK; Sherwin-Williams Hi-Heat Spray Enamel

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)	٨	400 psi (95% C, 5% A)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr ● 650	0	
05/02/90	2 hr 0 650	0	,
05/09/90	Test (Location 4)	٨	190 psi (40% C, 60% A)
05/11/90	Test (Location 5)	A	50 psi (20% A, 80% C)

# 27

# AEDC-14-92-2

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5501 Comments: 11 Dots

Materials: 50% HCl Acid; Standard MARB

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Vire Brush		
03/30/90	Apply MARB Paint		Brush
	Clean With Phosphoric Aci	d	Coating cannot be removed
06/08/90	Test (Location 1)	٨	>1000 psi (No Failure)
06/13/90	3.5 hr 0 140	Н	
06/14/90	Test (Location 1)	٨	>1000 psi (No Failure - Knock Dolly off with Hammer)
06/14/90	4 hr 0 600	С	
06/15/90	7 hr 0 15 - 150	Н	High Humidity
06/18/90	Test (Location 2)	٨	>1050 psi (No Failure)
06/18/90	30 min 9 -100	С	
06/18/90	1 hr 0 600	С	
06/18/90	30 min 0 -100	С	

Set: 13 Sample: 5501 Comments: Page 2

Materials: 50% HCl Acid; Standard MARB

Date	Action	Equip	Results/Comments
06/19/90	6 hr 0 120	Н	High Humidity
06/20/90	6 hr 0 120	Н	High Humidity

Sample: 5502

Comments: 11 Dots

Materials: 50% HCl Acid; Standard MARB

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		·
03/30/90	Apply MARB Paint	•	Brush
04/04/90	Test (Location 1)	A	O psi (Cohesive Failure while Scribing)
04/05/90	2 hr 0 615	0	`
04/09/90	Test (Location 2)	٨	>900 psi (No Failure)
04/09/90	l hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr 0 645	0	
04/12/90	2 hr 0 683	0	
04/13/SJ	2 hr 0 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr <b>0</b> 650	0	

Set: 13 Sample: 5502 Comments: Page 2

Materials: 50% HCl Acid; Standard MARB

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	
04/26/90	Test (Location 3)		300 psi (100% C)
04/27/90	2 hr 0 650	0	• • •
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	
05/09/90	Test (Location 4)	Α	690 psi (90% C, 10% A)
05/11/90	Test (Location 5)	A	700 psi (75% C, 20% A, 5% Epoxy)
07/12/90	15 min 0 -300	C	Extreme Cold (Mistake)
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs 0 130	Н	lkunid
07/13/90	2 hrs • 620	0	Hot, Dry
07/13/90	17 hrs 0 135	Н	Humid
07/16/90	Test (Location 6)	Α	>450 psi (70% Epoxy Failure - Bad Data)
07/16/90	4 hrs 0 620	0	Hot, Dry

Set-Sample	: 13 - 5502 Comme	nts: Page	3	1			
Materials:	50% HCL acid; Star	ndard MARB					
Equip Definitions: See Page 1							
Date	Action	Equip	Results/Comments				
07/19/90	Test (Location 7)	A					
07/25/90	20 hrs @ 130	Н	Wet to dry				
07/26/90	0.5 hrs @ 0	Н	Humi d				
07/26/90	19 hrs 0 130	Н	High humidity				
07/27/90	0.5 hrs @ 10	Н					
07/27/90	24 hrs 0 130 F	Н					
07/30/90	Test (Location 8)	A	1050				
	*****		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
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Set: 13 Sample: 5503 Comments: 12 Dot

Materials: MEK; Standard MARB

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply MARB Paint		Brush
04/04/90	Test (Location 1)	٨	O psi (Cohesive Failure while Scribing)
04/05/90	2 hr 0 615	0	`
04/09/90	Test (Location 2)	A	850 psi (50% C, 50% A)
04/09/90	1 hr 0 645		
04/10/90	12 hr 0 -110	В	
04/11/90	2 hr <b>0</b> 645	0	
04/12/90	2 hr <b>0</b> 683	0	
04/13/90	2 hr <b>0</b> 675	0	
04/16/90	12 hr 0 -110	В	
04/17/90	2 hr 0 650	0	

Set: 13

Sample: 5503

Comments: Page 2

Materials: MEK; Standard MARB

Date	Action	Equip	Results/Comments
04/23/90	2 hr 0 650	0	***************************************
04/26/90	Test (Location 3)	A	320 psi (95% C, 5% A)
04/27/90	2 hr 0 650	0	
05/01/90	2 hr 0 650	0	
05/02/90	2 hr 0 650	0	`
05/09/90	Test (Location 4)	Α	850 psi (100% C)
05/11/90	Test (Location 5)	Α	250 psi (45% Epoxy, 55% A)
06/26/90	Sent to AEDC		

Set: 16 Sample: 6701-TL(A) Comments:

Materials: Kano X-Rust Liquid, Brulin 835 Inhibitor, MZRB27

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Brulin 835		Brush
05/18/90	Coat with MZRB27		Brush
05/18/90	0.5 hr 0 200	0	Cure Cycle
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	C	
06/01/90	3 hr <b>0</b> 160	Н	Humid
06/01/90	20 min 0 -25	Н	
06/08/90	Test (Location 5)	٨	350 psi (12% Epoxy, 73% A Brulin/Steel, 15% A Rust/Steel)
06/13/90	3.5 hr 0 140	Н	
06/15/90	30 min 0 150	Н	
06/15/90	30 min 0 15	Н	

Set: 16 Sample: 6701-TL(A) Comments: Page 2

Materials: Kano X-Rust Liquid, Brulin 835 Inhibitor, MZRB27

	*************		
Date	Action	Equip	Results/Comments
06/15/90	30 min 0 150	H	
06/18/90	Test (Location 7)	٨	510 psi (85% Epoxy, 15% Cohesive)
06/18/90	3 hr 0 600	0	
06/19/90	6 hr 0 120	H	85-98% RH (No Coating Failures)

Set: 16 Sample: 6701-TR(B) Comments:

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB27

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Sharp 104		Brush
05/18/90	Coat with MZRB27		Brush
05/18/90	0.5 hr • 200	0	Cure Cycle
05/29/90	2 hr 0 150	H	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr • 160	H	Humid
06/01/50	20 min 0 -25	Н	
06/08/90	Test (Location 6)	٨	250 psi (5% Epoxy, 65% Brulin/Steel, 30% Rust/Steel)
06/13/90	3.5 hr 0 140	Н	
06/15/90	30 min @ 150	Н	
06/15/90	30 min 0 15	Н	

Set: 16

Sample: 6701-TR(B)

Comments: Page 2

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB27

Date	Action	Equip	Results/Comments
06/15/90	30 min 0 150	H	
06/18/90	3 hr 0 600	0	Coating Failure
06/19/90	6 hr 0 120	H	85-98% RH

Sample: 6701-BR(C)

Comments:

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB40

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Sharp 104		Brush
05/18/90	Coat with MZRB40		Brush
05/18/90	0.5 hr 0 200	0	Cure Cycle
05/29/90	2 hr 0 150	H	From dry to 100% RH
05/30/90	Test (Location 2)	A	>950 psi (No Failure)
05/30/90	1 hr <b>e</b> 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	Test (Location 3)	A	350 psi (40% Epoxy, 50% Sharp/Steel, 15% Rust/Steel)
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min @ +25	Н	
06/08/90	Test (Location 3A?)	٨	250 psi (85% Substrate, 5% Rust, 10% Epoxy Failure)
06/08/90	Test (Location 4)	٨	200 psi (40% Epoxy, 60% Substrate - No Rust)

Comments: Page 2

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB40

Date	Action	Equip	Results/Comments
06/08/90	Test (Location 5)	٨	350% (12% Epoxy, 73% Adhesion, 15% Adhesion -Rust)
06/13/90	3.5 hr 0 140	Н	
06/15/90	30 min # 150	Н	Coating Failure
06/15/90	30 min 0 15	H	Coating Failure
06/15/90	30 min 0 150	Н	Coating Failure
06/18/90	3 hr 0 600	0	Coating Failure
06/19/90	6 hr 0 120	H	85-98% RH

Comments:

Materials: Kano X-Rust Liquid, Brulin 805 Inhibitor, MZRB40

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust	*****	Soak 1 hr
05/18/90	Coat with Brulin 835		Brush
05/18/90	Coat with MZRB40		Brush
05/18/90	0.5 hr 0 200	0	Cure Cycle
05/24/90	Test (Location 1)	A	350 psi (20% Epoxy, 50% Brulin/Steel, 30% C in Paint)
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	l hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr • 160	Н	Humid
06/01/90	20 min @ -25	Н	
06/08/90	Test (Location 6)	٨	200 psi (40% Epoxy, 60% A Brulin/Steel) No Rust on Substrate
06/13/90	3.5 hr 0 140	Н	
06/15/90	30 min 150	Н	

Set: 16 Sample: 6701-BL(D) Comments: Page 2

Materials: Kano X-Rust Liquid, Brulin 805 Inhibitor, MZRB40

			***************************************
Date	Action	Equip	Results/Comments
06/15/90	30 min 0 15	H	
06/15/90	30 min # 150	H	Coating Failure
06/18/90	3 hr ● 600	0	
06/19/90	6 hr <b>9</b> 120	Н	85-98% RH

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		
05/18/90	Wire Brush		
05/18/90	Vipe with MEK		
05/18/90	Coat with Brulin 835		Brush
05/18/90	Coat with MARB		Brush
05/18/90	0.5 hr • 487	0	Cure Cycle
05/24/90	Test (Location 5)	À	>950 psi (No Failure)
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	Test (Location 7)	A	50 ps1 (90% Epoxy, 10% C) No Test
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 +25	Н	

Set: 16 Sample: 6702-TL(A) Comments: Page 2

Materials: VSI-421 Cleaner, Brulin 835 Inhibitor, Standard MARB

		Editib	Results/Comments	
, -,	4 hr # 160	***	Humid	p+++++++++++++++++++++++++++++++++++++

Set: 16 Sample: 6702-TR(B) Comments:

Materials: VSI-421 Cleaner, Sharp 104 Inhibitor, Standard MARB

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		·
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Sharp 104		Brush
05/18/90	Coat with MARB		Brush
05/18/90	0.5 hr • 487	0	Cure Cycle
05/24/90	Test (Location 6)	٨	400 psi (50% C, 50% A - Sharp/Steel)
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	***************************************
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 -25	Н	***************************************
06/05/90	4 hr 0 160	H	Hunid

Set: 16 Sample: 6702-TR(B) Comments:

Materials: VSI-421 Cleaner, Sharp 104 Inhibitor, Standard MARB

Equip Definitions: 0 = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date Action Equip Results/Comments

06/06/90 Test (Location 8) A 850 psi (85% A, 15% C)

Set: 16 Sample: 6702-BR(C) Comments:

Materials: VSI-421 Cleaner, Sharp 104 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		•••••••••••••••••••••••••••••••••••••••
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Sharp 104		Brush
05/18/90	0.5 hr <b>0</b> 487	0	·
05/29/90	2 hr • 150	H	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	H	Humid
06/01/90	20 min 0 25	Н	
06/05/90	4 hr 🗣 160	Н	Humid

Set: 16 Sample: 6702-BL(D) Comments:

Materials: VSI-421 Cleaner, Brulin 835 Inhibitor

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Brulin 835		Brush
05/18/90	0.5 hr <b>0</b> 487	0	`
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr @ 600	0	
05/31/90	5 hr 0 -100	C	
06/01/90	3 hr 0 160	Н	Hum1d
06/01/90	20 min 0 -25	H	
06/05/90	4 hr 0 160	Н	Humld

Set: 16 Sample: 6703-TL(A) Comments:

Materials: MEK, Sheffield Pot Belly Black, MARS

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast	• • • • • • •	,
05/21/90	Coat with Pot Belly Blaci	ζ	Brush
05/21/90	Coat with MARS	•	Brush
05/18/90	2 hr 0 487	0	Cure Cycle
05/24/90	Test (Location 11)	٨	>750 psi (Epoxy Failure)
05/29/90	2 hr 0 150	H	From dry to 100% RH
05/30/90	Test (Location 13)	٨	820 psi (60% Epoxy, 30% Paint Cohesive, 10% C Pot Belly Cohesive)
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	llumid
06/01/90	20 min 0 25	Н	
06/04/90	3 hr 0 610	C	

Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, MARS

Date	Action	Equip	Results/Comments
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	Н	
06/13/90	3.5 hr 0 140	H	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	H	Humid
06/15/90	30 min @ 150	Н	Humid
06/18/90	Test (Location 1)	٨	400 psi (90% Epoxy Failure, 10% Coating Cohesive)
06/18/90	3 hr 0 600	0	
06/19/90	6 hr 0 120	Н	85-98% RH
06/20/89	Test (Location 16)	٨	800 psi (60% Coating Cohesive, 40% Pot Belly Cohesive)

Set: 16 Sample: 6703-TR(B) Comments:

Materials: MEK, Sheffield Pot Belly Black, MARS

Date	Action	Equip	Results/Comments
05/21/90	Wipe with NEK	••••••	·
05/21/90	Glass Bead Blast	•••••	
05/21/90	Coat with Pot Belly Black	ζ	Brush
05/21/90	Coat with MARS	•••••	Brush
05/18/90	2 hr @ 487	0	Cure Cycle
05/29/90	2 hr • 150	Н	From dry to 100% RH
05/30/90	Test (Location 12)	A	>950 psi (90% Pot Belly Interfaces, 10% Paint Cohesive)
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min @ -25	Н	
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	

Sample: 6703-TR(B)

Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, MARS

Date	Action	Equip	Results/Comments
06/05/90	4 hr 0 160	Н	
06/06/90	Test (Location 14)	٨	400 psi (90% Epoxy Failure) No Test
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 15)	٨	>1000 psi (No Failure)
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min @ 150	Н	Humid
06/15/90	Test (Location 15)	Α	880 psi (60% Pot Belly Cohesive, 40% Coating Cohesive)
06/18/90	3 hr 0 600	0	
06/19/90	6 hr 0 120	H	85-98% RII

Set: 16 Sample: 6703-BR(C) Comments:

Materials: MEK, Brulin 835 Inhibitor

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast	•••••	
05/21/90	Coat with Brulin 835		Brush
05/18/90	0.5 hr • 487	0	
05/29/90	2 hr 0 150	H	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	H	Humid
06/01/90	20 min 0 -25	H	·
06/04/90	3 hr 0 610	С	***************************************
06/04/90	30 min @ -100	С	
06/05/90	4 hr 0 160	Н	
06/13/90	3.5 hr 0 140	Н	Humid

Set: 16

Sample: 6703-BR(C)

Comments: Page 2

Materials: MEK, Brulin 835 Inhibitor

Date	Action	Equip	Results/Comments
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min 0 150	H	Humid
06/18/90	3 hr 0 600	0	
06/19/90	6 hr 0 120	Н	85-98% RH

Comments:

Materials: MEK, Brulin 835 Inhibitor, MARS

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Brulin 835		Brush
05/21/90	Coat with MARS		Brush
05/18/90	0.5 hr 0 487	0	Cure Cycle
05/29/90	2 hr • 150	. Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr • 160	Н	Humid
06/01/90	20 min 0 -25	H	
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	Н	

Sat: 16 Sample: 6703-BL(D) Comments: Page 2

Materials: MEK, Brulin 835 Inhibitor, MARS

Date	Action	Equip	Results/Comments
06/13/90	3.5 hr 0 140	Н	Humid
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	H	Humid
06/15/90	30 min 0 150	Н	Humid
06/15/90	Test (Location 2)	٨	0 psi (100% Adhesion Failure)
06/18/90	3 hr ● 600	0	
06/19/90	6 hr # 120	H	85-98% RH

Set: 16 Sample: 6801-TL(A) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor, Sheffield Red Hot Aluminum Paint

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		***************************************
05/21/90	Vipe with NEK		
05/21/90	Coat with Brulin 835		Brush
05/21/90	Coat with S/W Red Hot		Brush
05/23/90	Test (Location 2)	A	400 psi (90% Cohesive)
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	Test		No Strength in Coating, No Scrape Resistance

Set: 16

Sample: 6801-TR(B)

Comments:

Materials: X-Rust Cleaner, MEK, Sharp 104 Inhibitor, Sheffield Red Hot Aluminum Paint

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Wipe with HEK		
05/21/90	Coat with Sharp 104		Brush
05/21/90	Coat with S/W Red Hot		Brush
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	Test		No Strength in Coating, No Scrape Resistance

Set: 16 Sample: 6801-BR(C) Comments:

Materials: X-Rust Cleaner, MEK, Sharp 104 Inhibitor

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Vipe with NEK		
05/21/90	Coat with Sharp 104	•	Brush
05/29/90	2 hr 0 150	H	From dry to 100% RH

Set: 16 Sample: 6801-BL(D) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 825		Brush
05/29/90	2 hr 0 150	Н	From dry to 100% RH
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Set: 16 Sample: 6803-Top(A,B) Comments:

Materials: MEK, Sheffield Pot Belly Black, MARB

•••••			***************************************
Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Pot Belly Blaci	(	Brush
05/21/90	Coat with MARB		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/23/90	Test (Location 12)	A	>950 psi (No Failure)
05/29/90	2 hr 0 150	H	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	Test (Location 13)	A	>1000 psi (No Failure)
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 -25	H	
06/04/90	3 hr 0 610	С	

Set: 16 Sample: 6803-Top(A,B) Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, MARB

Date	Action	Equip	Results/Comments
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	Н	
06/06/90	Test (Location 14)		650 psi (45% Pot Belly/Steel, 45% C Pot Belly, 10% C Paint)

Set: 16 Sample: 6803-BR(C) Comments:

Materials: MEK, Sharp 104 Inhibitor

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK	***	
05/21/90	Glass Bead Blast	******	
05/21/90	Coat with Sharp 104	*****	Brush
05/21/90	2 hr 0 487	0	
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr • 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 -25	Н	
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	Н	Rusting

Sample: 6803-BL(D)

Comments:

Materials: MEK, Sharp 104 Inhibitor, MARB

Date	Action	Equip	Results/Comments
05/21/^3	Wipe with MEK		
5/21/90	Glass Bead Blast		
5/21/90	Coat with Sharp 104		Brush
5/21/90	Coat with MARB		Brush
5/21/90	2 hr <b>0</b> 487	0	Cure Cycle
5/29/90	2 hr 🗣 150	н	From dry to 100% RH
5/30/90	1 hr 0 600	0	
5/31/90	5 hr 0 -100	C	
6/01/90	3 hr <b>0</b> 160	н	Humid
06/01/90	20 min 0 -25	H	
6/04/90	3 hr <b>9</b> 610	C	
6/04/90	30 min 0 -100	C	
6/05/90	4 hr @ 160	Н	MARB over 104 Failure

Set: 16 Sample: 6901-TL(A) Comments:

Materials: X-Rust Cleaner, MEK, MZRB40, MARS

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast	•••	
05.21/90	Wipe with MEK		
05/21/90	Coat with MZRB40		Brush
05/21/90	Coat with MARS		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/23/90	Test (Location 3)	٨	550 psi (60% Substrate, 40% Cohesive)
05/29/90	2 hr 0 150	. И	From dry to 100% RH
05/30/90	Test (Location 5)	٨	>1000 psi (100% Epoxy)
05/30/90	l hr 0 600	0	***************************************
05/31/90	5 hr 0 -100	С	
06/01/90	Test (Location 6)	Α	910 psi (100% Substrate)
06/01/90	3 hr @ 160	Н	Humid

Set: 16 Sample: 6901-TL(A) Comments: Page 2

Materials: X-Rust Cleaner, MEK, MZRB40, MARS

Date	Action	Equip	Results/Comments
06/01/90	20 min 0 -25	Н	
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	Н	
06/06/90	Test (Location 7)	A	1000 psi (95% A, 5% C)
06/08/90	Test (Location A)	٨	>1000 psi (No Failure)
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location A) Repeat	Α	1000 psi (100% Adhesion)
06/14/90	4 hr 0 600	С	
06/15/90	30 min @ 150	Н	Humid
06/15/90	30 min @ 15	Н	Humid
06/15/90	30 min @ 150	н	Humid
06/18/90	30 min 0 -100	С	

Set: 16 Sample: 6901-TL(A) Comments: Page 3

Materials: X-Rust Cleaner, MEK, MZRB40, MARS

Date	Action	Equip	Results/Comments
06/18/90	1 hr 0 600	С	
06/18/90	30 min 0 -100	С	
06/19/90	6 hr 🗣 120	Н	85-98% RH
06/20/90	Test (Location 10)	٨	>1050 psi (No Failure)
06/20/90	6 hr 0 120	H	85-98% RH
06/21/90	Test (Location 10)	٨	1050 psi (100% Adhesion)

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## MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-TR(B) Comments:

Materials: X-Rust Cleaner, MEK, MZRB40

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		***************************************
05/21/90	Glass Bead Blast		
05.21/90	Wipe with MEK		
05/21/90	Coat with MZRB40		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/29/90	2 hr 🗣 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min @ -25	Н	
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	H	

Set: 16 Sample: 6901-TR(B) Comments: Page 2

Materials: X-Rust Cleaner, MEK, MZRB40

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 8)	A	>600 psi (90% Epoxy Failure) No Test
06/08/90	Test (Location B)	A	>1050 psi (95% Epoxy Failure)
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 9)	٨	>1050 psi (No Failure)
06/18/90	30 min 0 -100	С	
06/18/90	l hr 0 600	С	
06/18/90	30 min # -100	С	
06/19/90	6 hr <b>0</b> 120	Н	85-98% RII
06/20/90	6 hr 0 120	H	85-98% RII

# 9

# AEDC:

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-BR(C) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor, MZRB40, MARB

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast	•	
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 835		·
05/21/90	Coat with MZRB40	******	Brush
05/21/90	Coat with MARB		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/21/90			Portion of Coating Delaminated off Substrate. Unclean Spot on Surface?
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 -25	H	

Set: 16 Sample: 6901-BR(C) Comments: Page 2

Materials: X-Rust Cleaner, MEK, Brulin 835, MZRB40, MARB

Date	Action	Equip	Results/Comments
06/04/90	3 hr 0 610	C	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	Н	***************************************
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	4 hr 0 600	С	`
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min 0 150	Н	Humid
06/18/90	30 min 0 -100	С	
06/18/90	l hr 0 600	С	
06/18/90	30 min 0 -100	C	
06/19/90	6 hr 0 120	Н	85-98% RH
06/20/90	6 hr 0 120	11	85-98% RH

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# AE

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-BL(D) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor, MZRB40, MARS

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK	******	
05/21/90	Coat with Brulin 835	•••••	
05/21/90	Coat with MZRB40		Brush
05/21/90	Coat with MARS	,	Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/23/90	Test (Location 4)	٨	50 psi (100% Substrate Adhesion) Coating Chips - Failure
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 -25	Н	

Set: 16 Sample: 6901-BL(D) Comments: Page 2

Materials: X-Rust Cleaner, MEK, Brulin 835, MZRB40, MARS

<b></b>			
Date	Action	Equip	Results/Comments
06/04/90	3 hr 0 610	C	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr • 160	Н	
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	4 hr ● 600	С	,
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min 0 15	H	Humid
06/15/90	30 min 0 150	H	Humid
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	С	
06/18/90	30 min 0 -100	С	
06/19/90	6 hr 0 120	Н	85-98% RH
06/20/90	6 hr 🗣 120	H	85-98% RH

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# NEDC-TR-92-23

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-TL(A) Comments:

Materials: VCI 421 Cleaner, MEK, Sheffield Red Hot Paint

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421		***************************************
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK	*********	***************************************
05/21/90	Coat with Red Hot		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/23/90	Test (Location 8)	٨	>610 psi (100% Epoxy Failure) No Test
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	H	Humid
06/01/90	20 min 0 -25	H	
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	

Set: 16

Sample: 6902-TL(A)

Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sheffield Red Hot Aluminum Paint

Date	Action	Equip	Results/Comments
06/05/90	4 hr 0 160	H	

Comments:

Set: 16

Materials: VCI 421 Cleaner, MEK, Sheffield Super Hot #326 Paint

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421	******	
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with #326 Paint		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/23/90	Test (Location 9)	A	>950 psi (No Failure)
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	Test (Location 11)	A	>900 psi (Epoxy Failure)
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	Test (Location 12)	A	650 psi (100% Cohesive)
06/01/90	3 hr 0 160	H	Humid
06/01/90	20 min 0 -25	 II	,

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-TR(B) Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sheffield Red Hot #326 Aluminum Paint

Date	Action	Equip	Results/Comments
06/04/90	3 hr 0 610	C	
06/04/90	30 min 0 -100	С	
06/05/90	4 hr 0 160	H	
06/06/90	Test (Location 13)	٨	>950 psi (No Failure)
06/08/90	Test (Location 13)	Α	500 psi (50% Cohesive in Top Coat, 50% Epoxy Failure) Questionable Data

Comments:

Haterials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, Standard MARB

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421		
05/21/90	Glass Bead Blast		***************************************
05/21/90	Wipe with MEK		
05/21/90	Coat With Sharp 104		Brush
05/21/90	Coat with MARB Paint		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	Humid
06/01/90	20 min 0 -25	Н	
06/04/90	3 hr @ 610	С	
06/04/90	30 min € -100	С	

Set: 16 Sample: 6902-BR(C) Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, MARB Paint

Date	Action	Equip	Results/Comments
• •	4 hr 0 160	Н	
			100% Coating Failure Over the Sharp 104

Set: 16 Sample: 6902-BL(D) Comments:

Materials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, Standard MARS

Date	Action	·Equip	Results/Comments
05/21/90	Clean with VCI 421	* - * * *	
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat With Sharp 104		Brush
05/21/90	Coat with MARS Paint		Brush
05/21/90	2 hr 0 487	0	Cure Cycle
05/23/90	Test (Location 10)	A	700 psi (60% Substrate, 40% Epoxy) Questionable Result
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr 0 160	Н	liumid
06/01/90	20 min 0 -25	Н	
06/04/90	3 hr @ 610	С	

Set: 16 Sample: 6902-BL(D) Comments: Page 2

Materials: VCI 421 Cleaner, HEK, Sharp 104 Inhibitor, MARS Paint

Date	Action	Equi <u>p</u>	Results/Comments
06/04/90	30 min 0 -100	C	
06/05/90	4 hr 0 160	Н	
			100% Coating Failure Over the Sharp 104

Set: 16 Sample: 6903-Top Comments:

Materials: MEK, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Pot Belly Paint		Brush
05/23/90	Test (Location 13)	٨	600 psi (70% Cohesive, 30% Epoxy) Questionable Result
05/29/90	Test (Location 14)	٨	960 psi (100% Cohesive)
05/29/90	2 hr 🛭 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	Test (Location 15)	A	650 psi (100% Cohesive)
06/01/90	3 hr ● 160	H	Humid
06/01/90	20 min 0 -25	H	
06/05/90	Test (Location 16)	A	>1000 psi (No Failure)
06/05/90	4 hr 0 160	С	

Set: 16 Sample: 6903-Top Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black Paint

Date	Action	Equip	Results/Comments
06/08/90	Test (Location 16)	A	>1000 psi (No Failure)
06/13/90	3.5 hr • 140	H	Humid
06/14/90	Test (Location 16)	٨	500 psi (100% Cohesive)
06/14/90	4 hr 0 600	C	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	H	Humid
06/15/90	30 min # 150	Н	Humid
06/19/90	Test (Location 17)	٨	450 psi (100% Cohesive)
06/19/90	6 hr 0 120	Н	Humid
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Set: 16 Sample: 6903-BR(C) Comments:

Materials: MEK, Sharp 104 Inhibitor, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK	•••••	
05/21/90	Coat with Sharp 104	••••••	Brush
05/21/90	Coat with Pot Belly Paint	;	Brush
05/23/90	Test	A	No Adhesion
05/29/90	2 hr ● 150	H	From dry to 100% RH
05/30/90	l hr ● 600	0	
05/31/90	5 hr 0 -100	С	
06/01/90	3 hr ● 160	Н	Humid
06/01/90	20 min 0 -25	Н	
06/05/90	4 hr • 160	Н	
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	4 hr 0 600	С	

Set: 16 Sample: 6903-BR(C) Comments: Page 2

Materials: MEK, Sharp 104 Inhibitor, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min ♦ 15	H	Humid
06/15/90	30 min ● 150	H	Huntd
06/19/90	6 hr 0 120	H	Humid

Set: 16 Sample: 6903-BL(D) Comments:

Materials: MEK, Brulin 835 Inhibitor, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		•••••••••••••••••••••••••••••••••••••••
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 835		Brush
05/21/90	Coat with Pot Belly Pain	t.	Brush
05/29/90	2 hr 0 150	Н	From dry to 100% RH
05/30/90	1 hr 0 600	0	
05/31/90	5 hr 0 -100	C	
06/01/90	3 hr 0 160	H	Humid
06/01/90	20 min 0 -25	Н	
06/05/90	4 hr 0 160	Н	
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid

Set: 16 Sample: 6903-BL(D) Comments:

Materials: MEK, Brulin 835 Inhibitor, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
06/15/90	30 min # 15	H	Humid
06/15/90	30 min 0 150	H	Humid
06/19/90	6 hr 0 120	Н	Humid

Comments:

Materials: Sharp 104 inhibitor

Date	Action	Faula	Danilla Managha
		Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Coat with Sharp 104		Brush
05/29/90	2 hr 0 150	Н	From dry to 100% RH
	••••		No Change Observed
06/15/90	30 min 0 150	Н	Hum1d
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min 0 150	Н	Humid, Little Rusting Evident
06/18/90	3 hr • 600	0	
06/19/90	6 hr 🗣 120	Н	Humid, Rusting Evident

Set: 16 Sample: 7001-Center Comments:

Materials: Brulin 835 Inhibitor

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		***************************************
05/21/90	Coat with Brulin 835		Brush
05/29/90	2 hr 0 150	Н	From dry to 100% RH
			No Change Observed
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min 0 150	H	Humid
06/18/90	3 hr 0 600	0	
06/19/90	6 hr 0 120	Н	Humid

Set: 16 Sample: 7002-Top Comments:

Materials: MEK, IDA-KOTE Conversion Coat

Date	Action	Equip	Results/Comments
05/21/90	Clean with MEK		
05/21/90	Coat with IDA-KOTE		Brush
05/23/90	Test (Location 14)	٨	650 psi (100% Substrate at Rust)
05/23/90	Test (Location 17)	٨	>900 psi (No Failure) This test is on corroded surface, no coatings!!!
05/29/90	2 hr 0 150	H	From dry to 100% RH

Set: 17

Sample: 7101

Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

with HCl ith Water		
***		
ith Brulin 835		Brush
ith Zinc Clad II		Brush, Cure 3 days at Ambient Conditions
ith MARB		Brush
480	0	Cure
Location 1)	A	450 psi (20% Cohesive Zn to MARB, 20% Substrate Adhesion)
140	Н	From dry to 98% RH
600	0	
Location 2)	A	350 psi (90% Zinc Clad Cohesive, 10% Zn/MARB Interface) Flaking
0 -25	H	
160	H	Humid
		***************************************
	ith MARB  480  Location 1)  140  600  Location 2)  0 -25	1th MARB  480

Set: 17 Sample: 7102 Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/26/90	Clean with HCl		
05/26/90	Wash with Water		
05/26/90	Wire Brush		
05/26/90	Coat with Brulin 835		Brush
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	2 hr 🗣 487	0	Cure
05/30/90	Test (Location 1)	A	650 psi (60% Cohesive, 40% Substrate Adhesion)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	A	750 psi (95% Zinc Clad/MARB, 5% Zinc/Substrate)
06/01/90	20 min 0 -25	H	
06/01/90	3 hr 0 160	Н	Humid

Set: 17 Sample: 7102 Co

Comments: Page 2

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/05/90	4 hr 0 160	H	Humid
06/06/90	Test (Location 3)	A	490 psi (80% Coating/Primer Interface, 15% Cohesive in Zinc, 5% Adhesion)

Set: 17 Sample: 7201 Comments:

Materials: VCI-421 Cleaner, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/26/90	Clean with VCI-421		
05/26/90	Wash with Water		
05/26/90	Wire Brush		,
05/26/90	Coat with Brulin 835		Brush
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr 0 487	0	Cure
05/30/90	Test (Location 1)	A	880 psi (85% Cohesive, 15% Substrate Adhesion)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/ <del>9</del> 0	3 hr 0 600	0	·
06/01/90	Test (Location 2)	٨	550 psi (80% Zinc Clad/MARB, 20% Zinc/Substrate)
06/01/90	20 min 0 -25	Н	
06/01/90	3 hr 0 160	H	Humid

Set: 17 Sample: 7201 Comments: Page 2

Materials: VCI-421 Cleaner, Brulin 835 Inhibitor, Zinc Clad II (AHK Hix), Standard MARB

Date	Action	Equip	Results/Comments
06/05/90	4 hr 0 160	Н	Humid
06/06/90	Test (Location 3)	٨	400 psi (90% Coating/Primer Interface, 10% Cohesive in Zinc, 5% Adhesion)

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# MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7202

Comments:

Materials: VCI-421 Cleaner, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/26/90	Clean with VCI-421		
05/26/90	Wash with Water		
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr 0 487	0	Cure
05/30/90	Test (Location 1)	٨	>980 psi (No failure)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	٨	>1000 psi (No Failure)
06/01/90	20 min 0 -25	H	
06/01/90	3 hr 0 160	Н	Humid
06/04/90	3 hr 0 610	С	
06/04/90	30 min ₱ -100	. С	

Set: 17 Sample: 7202

Comments: Page 2

Materials: VCI-421 Cleaner, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 3)	A.	600 psi (98% Coating/Primer Interface, 2% Cohesive in Zinc)
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	Humid
06/15/90	30 min 0 150	Н	Humid
06/18/90	3 hr 0 600	0	·
06/19/90	6 hr 120	H	lluntd
06/20/90	Test (Location 4 )	A	> 1050 psi (No Failure)
06/20/90	6 hr 0 120	H	Humid
06/21/90	Test (Location 4)	٨	450 psi (90% Cohesive)

Set: 17 Sample: 7301 Comments:

Materials: Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/26/90	Wire Brush		
05/26/90	Coat with Brulin 835		
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr 0 487	0	Cure
05/30/90	Test (Location 1)	A	900 psi (90% Cohesive MARB to Zinc, 10% Substrate Adhesion)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	٨	830 psi (90% Cohesive MARB to Zinc, 10% Substrate Adhesion)
06/01/90	20 min 0 -25	Н	***************************************
06/01/90	3 hr 0 160	Н	Humid
06/04/90	3 hr 0 610	С	
06/04/90	30 min 0 -100	С	

Set: 17

Sample: 7301

Comments: Page 2

Materials: Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 3)	A	920 psi (70% Coating/Primer Interface, 30% Cohesive in Zinc)
06/26/90	Sent to AEDC		***************************************

# 8

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 17 Sample: 7302 Comments:

Materials: MEK, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/26/90	Vire Brush		
05/26/90	Vipe with MEK		
05/26/90	Coat with Brulin 835		
05/26/90	Coat with Zinc Clad II	••••••	Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr <b>0</b> 487	0	Cure
05/30/90	Test (Location 1)	٨	430 psi (80% Cohesive, 20% MARB/Zinc Interface)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	A	350 psi (30% Cohesive MARB to Zinc, 70% Zinc Cohesive)

Comments:

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: 0 = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Wire Brush		,
05/26/90	NEK Wipe		
05/26/90	Coat with Pot Belly Black		Brush
05/26/90	Vire Brush		
05/26/90	Coat with Brulin 835	*****	Brush
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB	•••••	Brush
05/26/90	1 hr 0 487	0	Cure
05/30/90	Test (Location 1)	٨	410 psi (75% Cohesive MARB to Zinc, 25% Cohesive)
05/30/90	4 hr 0 140	H	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	A	650 psi (90% Zinc to Pot Belly, 10% Substrate Adhesion)
06/01/90	20 min 0 -25	H	

Set: 17 Sample: 7401 Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	3 hr 0 160	H	Humid
06/04/90	3 hr • 610	С	
06/04/90	30 min 0 -100	С	

Set: 17 Sample: 7402 Comments:

Materials: NEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/25/90	Wire Brush		
05/25/90	MEK Wipe		
05/25/90	Coat with Pot Belly Black		Brush
05/25/90	Wire Brush		
05/25/90	Coat with Brulin 835		Brush
05/26/90	Wire Brush		
05/26/90	Coat with Zinc Clad II		Brush
05/29/90	Coat with MARB		Brush
05/29/90	1 hr 0 487	0	Cure
05/30/90	Test (Location 1)	٨	720 psi (10% Cohesive Interface, 60% Cohesive, 30% Cohesive Pot Belly Black)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	A	550 psi (95% Zinc to MARB, 5% Substrate Adhesion) Flaking

Set: 17 Sample: 7402 Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Date	Action	Eguip	Results/Comments	
06/01/90	20 min 0 -25	H		
• •	3 hr 0 160	Н	Humid	

Set: 17

Sample: 7501

Comments:

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Date	Action	Equip	Results/Comments
05/25/90	Wire Brush		
05/25/90	HEK Wipe	•••••	
05/25/90	Coat with Pot Belly Black	· :	Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr • 487	0	Cure
05/30/90	Test (Location 1)	A	660 psi (100% Cohesive)
05/30/90	4 hr 0 140	H	From dry to 98% RH
05/31/90	3 hr • 600	0	
06/01/90	Test (Location 2)	A	>1000 psi (No Failure)
06/01/90	20 min 0 -25	H	
06/01/90	3 hr 0 160	Н	Humid
06/04/90	3 hr 0 610	C	
06/04/90	30 min 0 -100	С	······································

Set: 17 Sample: 7501 Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date Action Equip Results/Comments

06/06/90 Test (Location 3) A 300 psi (100% Cohesive in Pot Belly)

Set: 17

Sample: 7502

Comments:

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Date	Action	Equip	Results/Comments
05/26/90	Vire Brush		
05/26/90	MEK Wipe		
05/26/90	Coat with Pot Belly Black	(	Brush
05/26/90	1 h @ 350	0	Dry Pot Belly Black
05/26/90	Wire Brush		`
05/26/90	Coat with Pot Belly Black	ζ	Brush
05/26/90	1 h ● 350	0	Dry Pot Belly Black
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	0	Cure
05/30/90	Test (Location 1)	٨	820 psi (95% Cohesive, 5% Pot to Substrate)
05/30/90	4 hr 0 140	Н	From dry to 98% RH
05/31/90	3 hr 0 600	0	
06/01/90	Test (Location 2)	A	>530 psi (90% Pot Belly, 10% Pot Belly/MARB Interface)

Set: 17 Sample: 7502 Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	20 min 0 -25	Н	
06/01/90	3 hr 0 160	Н	Humid
06/08/90	Test (Location 3)	٨	420 psi (95% Pot Belly Cohesive, 5% MARB Cohesive)

Set: 17a Sample: 7/03 Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	HC1 Clean		
06/06/90	Wash with Water		Contains Sodium Bicarbonate
06/06/90	Coat with Brulin 835		Brush
06/06/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr <b>0</b> 480	0	Cure
06/08/90	Test (Location 1)	A	510 psi (90% Adhesion, 10% Cohesive)
06/13/90	3.5 hr Ø 140	Н	Humid
06/14/90	Test (Location 2)	A	650 psi (90% Adhesion, 10% Cohesive)
06/15/90	30 min Ø 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 3)	٨	950 psi (90% Adhesion, 10% Cohesive)

Set: 17a

Sample: 7103

Comments: Page 2

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 650	С	
06/18/90	30 min ● -100	С	
06/18/90	6 hr 0 120	Н	Hum1d
06/20/90	Test (Location 4)	٨	920 psi (90% Zinc Cohesive, 10% Interface)

Set: 17a Sample: 7/04 Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	HC1 Clean		
06/01/90	Wash with Water		Contains Sodium Bicarbonate
06/01/90	Vire Brush		
06/01/90	Coat with Brulin 835		Brush
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr 0 480	0	Cure
06/08/90	Test (Location 1)	A	280 psi (95% Zinc Cohesive)

Comments:

Materials: VCI-421 Cleaner, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	Clean with VCI-421		
06/01/90	Wash with Water	******	Contains Sodium Bicarbonate
06/01/90	Coat with Brulin 835	*	Brush
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr 0 480	0	Cure
06/08/90	Test (Location 1)	A	500 psi (80% Zinc Cohesive, 20% MARB Cohesive)
06/18/90	3 hr 0 600	0	
06/19/90	6 hr 0 120	Н	Huntd

Set: 17a Sample: 7204 Comments:

Materials: VCI-421 Cleaner, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	Clean with VCI-421		
06/01/90	Wash with Water		Contains Sodium Bicarbonate
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr 0 480	0	Cure
06/08/90	Test (Location 1)	٨	450 psi (80% Adhesion, 20% Cohesive)
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 2)	٨	750 psi (60% Zinc Cohesive, 40% MARB Cohesive)
06/15/90	30 min # 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 3)	٨	600 psi (80% Zinc Cohesive, 20% Interface)
06/18/90	3 hr • 600	0	

Set: 17a Sample: 7204 Comments: Page 2

Materials: VCI-421 Cleaner, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/19/90	6 hr 0 120	H	Humid
06/20/90	Test (Location 4)	A	760 psi (90% Zinc Cohesive, 10% Interface)
06/20/90	6 hr 🖣 120	Н	Humid

Set: 17a

**Sample: 7303** 

Comments:

Materials: MEK, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (COM Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	Wire Brush		
06/01/90	Wipe with MEK		
06/01/90	Coat with Brulin 835		Brush
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brust
06/06/90	2 hr 0 480	0	Cure
06/08/90	Test (Location 1)	٨	410 psi (30% Adhesion, 40% MARB Cohesive, 30 Zinc Cohesive)

Set: 17a Sample: 7304 Comments:

Materials: HEK, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	Wire Brush		
06/01/90	Wipe with MEK	•••••	
06/01/90	Coat with Brulin 835		Brush
06/04/90	Wire Brush		
06/06/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr 0 480	0	Cure
06/08/90	Test (Location 1)	٨	900 psi (85% Adhesion, 15%)
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 2)	٨	950 psi (No Failure)
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min # 150	Н	Humid

Set: 17a Sample: 7304 Comments: Page 2

Materials: MEK, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/18/90	Test (Location 3)	A	720 psi (20% Zinc Cohesive, 80% Adhesion)
06/18/90	3 hr 0 600	0	
06/19/90	6 hr • 120	Н	Humid
06/20/90	Test (Location 4)	A	950 psi (90% Zinc Cohesive, 10% Interface)

Sample: 7403

Comments:

Materials: MEK, Sheffield Pot Belly Black, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/06/90	Wire Brush		
06/06/90	Wipe with MEK		
06/06/90	Pot Belly Black		· Brush
06/06/90	Wire Brush		
06/06/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr <b>0</b> 480	0	Cure
06/08/90	Test (Location 1)	A	480 psi (85% Zinc Cohesive, 15% MARB Cohesive)
•••••			Pot Belly Black did not come off with wire brushing

Set: 17a Sample: 7404

Comments:

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/01/90	Wire Brush		
06/01/90	Wipe with MEK		
06/01/90	Pot Belly Black		Brush
06/01/90	1 hr 0 350		Bake Pot Belly Black
06/01/90	Wire Brush		,
06/01/90	Coat with Brulin 835		Brush
06/04/90	Wire Brush		
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr 0 480	0	Cure
06/08/90	Test (Location 1)	A	510 psi (40% Zinc Cohesive, 60% MARB Cohesive)
06/13/90	3.5 hr @ 140	Н	Humid
06/14/90	Test (Location 2)	A	1050 psi (90% Zinc Cohesive, 10% Coating Cohesive)

Set: 17a Sample: 7404 Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Date	Action	Equip	Results/Comments
			vesdits/ comments
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 3)	٨	750 psi (60% Zinc Cohesive, 40% Coating Cohesive)
06/18/90	3 hr 0 600	0	`
06/19/90	6 hr 0 120	Н	llum i d
06/20/90	Test (Location 4)	A	780 psi (80% Zinc Cohesive, 20% Epoxy)
06/20/90	30 min 0 -110	С	
06/20/90	1 hr 0 610	С	
06/20/90	30 min 0 -110	Ċ	
			***************************************

Sample: 7601

Comments:

Materials: MEK, Nybco Bar-B-Q Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h 0 350	0	Dry Bar-B-Q Black
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	l h 0 212	0	Dry Brulin 835
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	·1 hr 0 487	0	Cure
06/05/90	4 hr 0 160	Н	Humid
06/06/90	Test (Location 1)	A	580 psi (60% Zinc Clad Cohesive, 40% MARB Cohesive)

Set: 17b Sample: 7602 Comments:

Materials: MEK, Nybco Bar-B-Q Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe	• • • • • • • • • • • • • • • • • • • •	***************************************
05/31/90	Vire Brush		•
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h 0 350	0	Ory Bar-B-Q Black
05/31/90	Vire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	30 min 0 212	0	Dry Brulin 835
05/31/90	Wire Brush		
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr 0 480	0	Cure
06/05/90	4 hr 0 160	Н	itumid

Set: 17b

Sample: 7602

Comments: Page 2

Haterials: NEK, Nybco Bar-B-Q Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 1)	A	310 psi (90% Zinc Clad Cohesive, 5% MARB Cohesive, 5% Bar-B-Q Cohesive)

Comments:

Materials: MEK, Nybco Bar-B-Q Black, Standard MARB

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h 0 350	0	Dry Bar-B-Q Black
05/31/90	Coat with MARB		Brush
05/31/90	1 hr 0 480	0	Cure
06/05/90	4 hr 0 160	Н	Humid
06/06/90	Test (Location 1)	٨	400 psi (90% MARB Cohesive, 10% Bar-B-Q Cohesive)
06/08/90	Test (Location 2)	A	750 psi (95% MARB Cohesive, 5% Bar-B-Q Cohesive)

Set: 17b Sample: 7702 Comments:

Materials: MEK, Mybco Bar-B-Q Black, Standard MARB

Date	Action	Equip	Results/Comments
05/31/90	NEK Wipe		
05/31/90	Wire Brush	******	
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h 0 350	0	Dry Bar-B-Q Black
-05/31/90	Wire Brush		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h 0 350	0	Dry Bar-B-Q Black
05/31/90	Coat with MARB		Brush
05/31/90	1 hr • 480	0	Cure
06/05/90	4 hr 0 160	H	Humid
06/06/90	Test (Location 1)	٨	610 psi (90% MARB Cohesive, 10% Bar-B-Q Cohesive)
06/08/90	Test (Location 2)	٨	700 psi (90% MARB Cohesive, 6% Substrate Adhesion, 4% Epoxy)

Sample: 7801

Comments:

Materials: MEK, Meutra-Rust Conversion Coat, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MA

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	NEK Wipe		
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	1 h • 350	0	Dry Neutra-Rust
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	Coat with Zinc Clad II	****	Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr 0 480	0	Cure
06/05/90	4 hr @ 160	Н	Humid
06/06/90	Test (Location 1)	٨	100 psi (50% Zinc to Neutra-Rust, 30% Neutra-Rust Cohesive, 20% MARB Cohesi
•••••			Material Flakes; Zinc Clad over Neutra-Rust is poor choice

Set: 17b Sample: 7802 Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARI

	•••••		***************************************
Date	Action	Equip	Results/Comments
05/31/90	NEK Wipe		·
05/31/90	Wire Brush		***************************************
05/31/90	NEK Vipe		***************************************
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	1 h ● 350	0	Dry Neutra-Rust
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	1 hr 0 212	0	Dry Brulin 835
05/31/90	Wire Brush		***************************************
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr 0 480	0	Cure
06/05/90	4 hr 0 160	Н	Humid
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Set: 17b

Sample: 7802

Comments: Page 2

Materials: MEK, Neutra-Rust Conversion Coat, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 1)	٨	320 psi (45% Zinc to Neutra-Rust, 50% Neutra-Rust Cohesive, 5% MARB Cohesive)
	***************************************		Zinc Clad over Neutra-Rust is poor choice; Neutra-Rust does not wire brush of

Set: 17b

Sample: 7901

Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Standard MARB

Date	Action	Equip	Results/Comments
05/31/90	NEK Wipe		
05/31/90	wire Brush		
05/31/90	MEK Wipa		
05/31/90	Coat with Neutra-Rust	••••••	Brush
05/31/90	Coat with MARS	•••••	Brush
05/31/90	1 hr 0 480	0	Cure
06/05/90	4 hr ● 160	H	Humid
06/06/90	Test (Location 1)	٨	210 psi (30% Adhesion, 20% Neutra-Rust Cohesive, 50% MARB Cohesive)
		•	Blistered; failed first test

Set: 17b

Sample: 7902 '

Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Standard MARB

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		***************************************
05/31/90	MEK Wipe		•••••••••••••••••••••••••••••••••••••••
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	Wire Brush		,
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	Coat with HARB		Brush
05/31/90	1 hr 0 480	0	Cure
06/05/90	4 hr 0 160	H	Humid
			Blistered, Flaked, Complete Failure

Set: 18

Sample: 8001

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARB (5.0 SR240, 5.0 Toluene, 10.0 DC6-2230, 10.0 Xylene, 7.4 MD 7100 Al, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with MARB		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	Test (Location 1)	A	800 psi (97% Epoxy, 3% Adhesion to Rusty Substrate)
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 2)	A	600 psi (85% Adhesion, 15% Epoxy)
06/18/90	3 hr 0 600	0	

# 131

## MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8001

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARB (5.0 SR240, 5.0 Toluene, 10.0 DC6-2230, 10.0 Xylene, 7.4 MD 7100 Al, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/19/90	6 hr 0 120	Н	Humid
06/20/90	Test (Location 4)	A	780 psi (80% Zinc Cohesive, 20% Epoxy)
06/20/90	30 min 0 -110	С	
06/20/90	1 hr 0 610	C	
06/20/90	30 min 0 -110	C	
06/20/90	Test (Location 3)	Α	>1050 psi (No Failure)
06/26/90	Sent to AEDC		

Set: 18 Sample: 8002 Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, HEK, MRC HARS-2 (2.5 DC-805, 2.5 50% Xylene, DC6-2330, 12.5 Xylene, 13.5 HD 7100 Al, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with MARS-2		Brush
06/12/90	1 hr • 487	0	Cure
06/13/90	3.5 hr 0 140	Ħ	Humid
06/14/90	Test (Location 1)	A	600 psi (100% Epoxy)
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min 0 15	H	
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 2)	A	>1050 psi (No Failure)
06/18/90	•30 min 0 -100	С	

Set: 18 Sample: 8002 Comments: page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARS-2 (2.5 DC-805, 2.5 50% Xylene, DC6-2330, 12.5 Xylene, 13.5 MD 7100 Al, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/18/90	1 hr 0 600	С	
06/18/90	30 min € -100	С	
06/19/90	6 hr 0 120	. H	Humid
06/20/90	Test (Location 3)	Α	620 psi (20% Cohesive, 20% Epoxy, 60% Adhesion)
06/20/90	6 hrs 0 120	Н	`
07/09/90	Methylene Chloride		Clean MARS off (does not clean off)
07/14/90	Test (Location 4)	A	>1000 PSI
07/25/90	Test (Location 5)	٨	>1000 PSI
07/25/90	20 hrs • 130 F	Н	wet to dry
07/26/90	1/2 hr 0 0 F	łı	
07/26/90	24 hrs 0 130 F	H	
07/27/90	1/2 hr @ 10 F	Н	
07/27/90	24 hrs 0 130 F		
07/30/90	Test (Location 6)	Α	>1000 (80% C; 20% A-Substrate)

Set: 18

Sample: 8101(L)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with ZS-1		Brush
06/12/90	1 hr • 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min @ 15	H	***************************************
06/15/90	30 min 0 150	Н	llumid
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	С	

Set: 18 Sample: 8101(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO)

•			***************************************
Date	Action	Equip	Results/Comments
06/18/90	30 min 0 -100	С	
06/19/90	6 hr • 120	Н	Humid
06/20/90	Test (Location 3)	A	950 psi (100% Adhesive)
06/20/90	30 min 0 -110	C	
06/20/90	1 hr <b>0</b> 610	С	
06/20/90	30 min 0 -110	С	
06/26/90	1 hr 0 -120	C	
06/26/90	1 hr 0 620	С	
06/26/90	l hr 0 -110	, C	
06/27/90	Sent to AEDC		***************************************

Set: 18

Sample: 8101(C)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, HEK, NRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zm Dust, 0.15 ZmO), NRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zm Dust, 0.15 ZmO)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with ZS-2		Brush
06/12/90	Coat with ZS-1		Brush
06/12/90	1 hr ● 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	Test (Location 1)	٨	300 psi (90% Epoxy, 10% Cohesive)
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min # 15	H	•••••••••••••••••••••••••••••••••••••••
06/15/90	30 min # 150	Н	Humid
06/18/90	30 min 0 -100	С	

Set: 18 Sample: 8101(C) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbenate, HEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO), MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/18/90	1 hr 0 600	С	•••••••••••••••••••••••••••••••••••••••
06/18/90	30 min 0 -100	С	·
06/19/90	6 hr 0 120	, н	Humid
06/20/90	Test (Location 2)	, A	580 psi (100% Adhesive)
06/20/90	30 min 0 -110	C	,
06/20/90	l hr 0 610	С	
06/20/90	30 min 0 -110	C	
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	C	
06/27/90	Sent to AEDC	• • • • • • • • • • • • • • • • • • • •	

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

0-4-	A-A1.	*****	A 5. /A .
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Vipe with MEK		
06/12/90	Coat with ZS-2		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	C	
06/18/90	30 min 0 -100	С	***************************************

Set: 18 Sample: 8101(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

Date	Action	Equip	Results/Comments
06/19/90	6 hr 0 120	Н	Humid
06/20/90	Test (Location 4)	٨	800 psi (100% Adhesive)
06/20/90	30 min 0 -110	C	
06/20/90	1 hr 0 610	C	
06/20/90	30 min 0 -110	С	`
.06/26/90	1 hr 0 -120	С	
06/26/90	1 hr • 620	C	
06/26/90	1 hr 0 -110	С	
06/27/90	Sent to AEDC		

Sample: 8201(Top) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Red Hot Paint

Equip Definitions: 0 = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

	•••••••••		
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Red Hot		Brush
06/12/90	l hr ● 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 1)	٨	>1000 psi (No Failure)
06/14/90	4 hr ● 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	H	llumid
06/18/90	Test (Location 3)	٨	>1050 psi (no failure)
06/18/90	30 min 0 -100	С	······································

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Set: 18 Sample: 8201(Top) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Red Hot Paint

Date	Action	Equip	Results/Comments
06/18/90	l hr ● 600	С	
06/18/90	30 min 0 -100	C	
06/19/90	6 hr 0 120	Н	llumid
06/20/90	Test (Location 5)	٨	>1050 psi (100% Adhesive)
06/20/90	30 min 0 -110	С	· · · · · · · · · · · · · · · · · · ·
06/20/90	1 hr 0 610	С	
06/20/90	30 min 0 -110	С	
06/26/90	1 hr 0 -120	C	
06/26/90	1 hr 0 620	C	
06/26/90	l hr # -110	С	
06/27/90	Sent to AEDC	*********	

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield #326 Paint

Equip Definitions: 0 = 0ven;  $C = \frac{1}{2}$  Heat/Cooling Chamber;  $H = \frac{1}{2}$  Humidity Chamber; A = Adhesion Tester

	••••		
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Vipe with MEK		
06/12/90	Coat with #326	******	Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 2)	٨	>1000 psi (No Failure)
06/14/90	4 hr 0 600	С	
06/15/90	30 min @ 150	Н	Humid
06/15/90	30 min 0 15	H	
06/15/90	30 min 0 150	Н	Humid
06/18/90	Test (Location 4)	٨	>1050 psi (no Failure)
06/18/90	30 min 0 -100	С	
			***************************************

Set: 18 Sample: 8201(Bottom) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield #326 Paint

Date	Action	Equip	Results/Comments
06/18/90	1 hr 0 600	C	
06/18/90	30 min € -100	C	
06/19/90	6 hr 0 120	Н	Humid
06/20/90	30 min 0 -110	C	
06/20/90	1 hr 0 610	С	
06/20/90	30 min 0 -110	C	
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr • 620	С	
06/26/90	1 hr 0 -110	C	
06/27/90	Sent to AEDC		

Set: 18 Sample: 8301(LL) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Nybco Bar-B-Q Black

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Bar-B-Q		Spray
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr <b>0</b> 140	H	Humid
06/14/90	Test (Location 3)	٨	1000 psi (90% Adhesion, 10% Cohesive, No Rust)
06/14/90	4 hr 0 600	С	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min # 150	И	Humid
06/18/90	Test (Location 4)	A	>1050 psi (no Failure)
06/18/90	30 min 0 -100	С	

Set: 18

Sample: 8301(LL)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Nybco Bar-B-Q Black

Date	Action	Equip	Results/Comments
06/18/90	1 hr 0 600	С	
06/18/90	30 min 0 -100	C	
06/19/90	6 hr 0 120	Н	Humid
06/20/90	Test (Location 6)	A	1050 psi (100% Cohesive)
06/20/90	6 hr 0 120	Н	Humid

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3	*	Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Pot Belly	~	Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 2)	٨	>1000 psi
06/14/90	4 hr 0 600	С	
06/15/90	30 min # 150	H	liumid
06/15/90	30 min 0 15	Н	·
06/15/90	30 min @ 150	Н	llumid
06/18/90	Test (Location 5)	A	520 psi (90% Cohesive, 10% Epoxy)
06/18/90	30 min 0 -100	С	

Set: 18

Sample: 8301(LC)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Pot Belly Black

Date	Action	Equip	Results/Comments
06/18/90	1 hr # 600	С	
06/18/90	30 min 0 -100	С	
06/19/90	6 hr <b>0</b> 120	Н	Humid
06/20/90	6 hr 0 120	Н	Humid

Set: 18 Sample: 8301(RC) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Neutra-Rust

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Pot Belly		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	С	
06/18/90	30 min 0 -100	С	
06/19/90	6 hr \varTheta 120	11	Humid

Set: 18

Sample: 8301(RC)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Neutra-Rust

Date	Action	tquip	Results/Comments	
00/20/30	0 ML & 150	K	Humid	••••

Set: 18 Sample: 8301(RR) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, NEK, IDA-Kote

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with IDA-Kote		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 1)	٨	300 psi (100% Adhesion - Rust)
06/14/90	4 hr 0 600	С	
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	H	
06/15/90	30 min # 150	Н	Humid
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	С	

Set: 18

Sample: 8301(RR)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, IDA-Kote

Date	Action	Equip	Results/Comments
06/18/90	30 min 6 -100	С	
06/19/90	6 hr 0 120	Н	Humid
06/20/90	6 hr 0 120	Н	Humid

Set: 18 Sample: 8401(Side A) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

06/08/90 Wire B 06/12/90 Wipe w 06/12/90 Coat M	NaHCO3 rush ith MEK	Remove Mill Scale  Neutralize, Dry
06/08/90 Wire B 06/12/90 Wipe w 06/12/90 Coat M	rush ith MEK	
06/12/90 Wipe w 06/12/90 Coat M	ith NEK	Company
06/12/90 Coat M		Company
	S-122	
		Spray
06/12/90 1 hr 0	487 0	Cure
06/13/90 3.5 hr	0 140 H	Humid
06/14/90 4 hr 0	600 C	
06/15/90 30 min	€ 150 H	Humid
06/15/90 30 min	0 15 H	
06/15/90 30 min	0 150 H	Humid
06/18/90 Test (	Location 2) A	ο psi (100% Εροχy - Fluorocarbons Difficult to Bond to)
06/18/90 30 min	● -100 C	

Set: 18

Sample: 8401(Side A)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Equip Definitions: 0 = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr ● 600	C	
	***************		
06/18/90	30 min 0 -100	C	
06/19/90	6 hr 0 120	H	Humid
06/20/90	Test (Location 3)	<b>A</b>	O psi (100% Epoxy - No Bonding to Fluorocarbons)
06/20/90	6 hr • 120	H	flumid
06/26/90	15 hrs 0 120-180	Н	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side B-L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, NEK, MS-122

••••••			
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/08/90	Wire Brush		
06/12/90	Vipe with MEK		
06/12/90	Coat MS-122		Spray
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	4 hr 0 600	С	·
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	H	Humid
06/18/90	30 min 0 -100	C	
06/18/90	l hr • 600	C	

Set: 18 Sample: 8401(Side B-L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Date	Action	Equip	Results/Comments
06/18/90	30 min 0 -100	C	
06/19/90	6 hr 0 120	н	Humid
06/20/90	6 hr • 120	Н	Humid
06/26/90	15 hrs 0 120-180	H	***************************************

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/12/90	Vipe with NEK		
06/12/90	Coat MS-122		Spray
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Humid
06/14/90	Test (Location 1)	٨	100 psi
06/14/90	4 hr 0 600	C	(100% Adhesion - Rusty Substrate)
06/15/90	30 min ● 150	Н	Humid
06/15/90	30 min ● 15	Н	
06/15/90	30 min ● 150	Н	Humid
06/18/90	30 min 0 -100	C	
06/18/90	1 hr 0 600	С	

Set: 18 Sample: 8401(Side B-R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Date	Action	Equip	Results/Comments
06/18/90	30 min 0 -100	С	***************************************
06/19/90	6 hr 0 120	H	Humid
06/20/90	6 hr <b>0</b> 120	Н	Humid
06/26/90	15 hrs 0 120-180	Н	

Set: 18 Sample: 8402-TL(A) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358 Hold Release

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Ory
06/08/90	Wire Brush		
06/08/90	Vipe with MEK		
06/12/90	Coat with McLube 358		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr • 140	Н	Humid
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min ● 150	н	Humid
06/18/90	30 min # -100	С	
06/18/90	Test (Location 2)	<b>A</b>	620 psi (100% Epoxy - Some Rusting)
06/18/90	3 hr • 600	C	

Set: 18 Sample: 8402-TL (A) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358

Date	Action	Equip	Results/Comments
06/19/90	6 hr <b>0</b> 120	H	Humid
06/20/90	6 hr 0 120	Н	Humid
06/26/90	1 hr 0 -120	C	
06/26/90	l hr 0 620	С	·
06/26/90	1 hr 0 -110	C	
06/26/90	15 hrs 0 120 - 180	Н	Completely Rusted Panel

Set: 18 Sample: 8402-TR(B) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358 Mold Release

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/08/90	Wipe with MEK		
06/12/90	Coat with McLube 358		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	Test (Location 1)	A	450 psi (100% Cohesive - some rusting)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min ♥ 15	Н	
06/15/90	30 min € 150	Н	Humid
06/18/90	30 min → -100	С	
06/18/90	3 hr 0 600	С	

Set: 18

Sample: 8402-TR (B)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358

Date	Action	Equip	Results/Comments
06/19/90	6 hr 0 120	H	Humid
06/20/90	6 hr 0 120	Н	Humid
06/26/90	1 hr 0 -120	C	
06/26/90	1 hr <b>0</b> 620	C	
06/26/90	1 hr 8 -110	С	
06/26/90	15 hrs 0 120 - 180	Н	Completely Rusted Panel

Set: 18 Sample: 8402-BR(C) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362 Mold Release

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/08/90	Wipe with MEK		
06/12/90	Coat with McLube 362		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr 0 140	Н	Hum1d
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	30 min 0 -100	С	•••••••••••••••••••••••••••••••••••••••
06/18/90	3 hr 0 600	C	
06/19/90	6 hr 0 120	Н	Humid
06/20/90	6 hr 🛭 120	H	Humid

Set: 18

Sample: 8402-BR(C)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362 Mold Release

Date	Action	Equip	Results/Comments
06/26/90	l hr 0 -120	С	
06/26/90	1 hr 0 620	C	
06/26/90	1 hr 0 -110	C	
06/26/90	15 hrs 0 120 - 180	Н	Completely Rusted Panel

Set: 18 Sample: 8402-BL(D) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362 Mold Release

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/08/90	Wire Brush		
06/08/90	Wipe with MEK		***************************************
06/12/90	Coat with McLube 362		Brush
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr ● 140	Н	Humid
06/15/90	30 min 0 150	H	Hum1d
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	Н	Humid
06/18/90	30 min ● -100	С	***************************************
06/18/90	3 hr 0 600	С	***************************************
06/19/90	6 hr 0 120	Н	Humid

Set: 18 Sample: 8402-BL (D) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, HcLube 362

Date	Action	Equip	Results/Comments
06/20/90	Test (Location 3)	A	
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs 0 120 - 180	Н	Completely Rusted Panel

Set: 18 Sample: 8403-Top Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond HT (Phenyl-Methyl Silicone/MoS<sub>2</sub>)

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/11/90	Coat with Lubribond	*****	
06/12/90	l hr • 487	0	Cure
06/13/90	3.5 hr • 140	H	Humid
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min ● 15	H	
06/15/90	30 min # 150	H	Humid
06/18/90	3 hr 0 600	С	
06/19/90	6 hr • 120	H	Humid

# 6

# MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8403-Bottom Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond HT (Phenyl-Methyl Silicone/MoS<sub>2</sub>)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/11/90	Coat with Lubribond		
06/11/90	Coat with Lubribond	*	
06/12/90	1 hr • 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	Test (Location 1)	A	900 psi (100% Cohesive, Rusting Appeared 6/15/90)
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	Н	
06/15/90	30 min 0 150	H	Humid
06/18/90	Test (Location 2)	A	920 psi (100% Cohesive, No Rusting Evident)
06/18/90	3 hr 0 600	С	
06/19/90	6 hr • 120	Н	Humid

Set: 18 Sample: 8404-Side A Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond 320 (Fluorocarbon)

			•••••••••••••••••••••••••••••••••••••••
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/11/90	Wipe with MEK		
06/11/90	Coat with Lubribond 320	*******	
06/12/90	1 hr 0 487	0	Cure
06/13/90	3.5 hr • 140	Н	Humid
06/15/90	30 min 0 150	H	Humid
06/15/90	30 min 0 15	H	
06/15/90	30 min 0 150	H	Humid
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	С	
06/18/90	30 min 0 -100	С	
06/19/90	6 hr <b>0</b> 120	H	85-98% RH
			• • • • • • • • • • • • • • • • • • • •

Set: 18 Sample: 8404-Side A

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond 320 (Fluorocarbon)

Comments:

Date	Action	Equip	Results/Comments
06/20/90	6 hr 0 120	H	Humid

Set: 18 Sample: 8404-Side B Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Lubribond 320 (Fluorocarbon)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Ory
06/11/90	Vire Brush	*	
06/11/90	Wipe with MEK	*****	·
06/11/90	Coat with Lubribond 320		Brush
06/12/90	l år 0 487	0	Cure
06/13/90	3.5 hr 0 140	H	Humid
06/14/90	Test (Location 1)	٨	>1050 psi (No Failure)
06/15/90	30 min 0 150	Н	Humid
06/15/90	30 min 0 15	H	
06/15/90	30 min 0 150	Н	Humid
06/15/90	Test (Location 1)	٨	>1000 psi (No Failure)
06/18/90	Test (Location 1)	Α	>1000 psi (No Failure)

# 171

## MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8404-Side B

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Lubribond 320 (Fluorocarbon)

Date	Action	Equip	Results/Comments
06/18/90	30 min 0 -100	С	
06/18/90	1 hr 0 600	С	
06/18/90	30 min ● -100	С	
06/19/90	6 hr 0 120	Н	85-98% RH
06/20/90	Test (Location 2)	A	1000 psi (100% Epoxy Failure)
06/20/90	6 hr 0 120	Н	Hum1d

Set: 18 Sample: 8405 Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Esnalube 382 ( MoS<sub>2</sub> in Silicate Binder)

Action	Equip	Results/Comments
Acid Clean	•	Remove Hill Scale
Dip in NaHCO3	••••	Neutralize, Dry
Wire Brush		
Coat with Esnalube 382		Brush
6 hr 0 120	Н	85-98% RH
Test (Location 1)	A	400 psi (70% Cohesive, 30% Adhesive)
6 hr 0 120	Н	Humid - Rust, coating does not protect against moisture
	Dip in NaHCO <sub>3</sub> Wire Brush Coat with Esnalube 382 6 hr 0 120 Test (Location 1)	Dip in NaHCO <sub>3</sub> Wire Brush Coat with Esnalube 382 6 hr 0 120 H Test (Location 1) A

Set: 18 Sample: 8406 Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Everlube 812 (MoS<sub>2</sub> in Silicate Binder)

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean	••••••	Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/18/90	Wire Brush		
06/18/90	Coat with Everlube 812		Brush
06/18/90	2 hr 0 150	0	Cure after 15 minutes ambient dry
06/18/90	2 hr 0 400	0	Cure
06/19/90	6 hr @ 120	Н	85-98% RH
06/20/90	Test (Location 1)	A	1050 psi (No Failure)
06/20/90	6 hr # 120	Н	Numid - Rust, coating does not protect against moisture
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs @ 120-180		Humid to Dry, Rusted Panel

Set: 19

Sample: 8500(L)

Comments: Control Panel

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Wipe with MEK		
06/25/90	Coat with MARB		Brush
06/25/90	1 hr • 487	0	Cure
06/26/90	1 hr ● -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	l hr 0 -110	С	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	H	Very Humid
06/28/90	6 hr 0 130	H	
6/29/90	Test (Location 1)	A	>1050 (No Failure)

Set: 19 Sample: 8500(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	C	
06/29/90	Test (Location 1)	٨	O psi (40% Adhesion, 30% Cohesion, 30% Epoxy) - No Test 3rd Pull @ 200 F
06/29/90	3 hrs <b>0</b> 600	0	
07/02/90	5 hrs 0 140	Н	
07/12/90	15 min 0 -300	C	Extreme Cold
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs # 130	H	
07/13/90	2 hrs @ 620	0	
07/13/90	17 hrs 0 135	Н	
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs 0 130 F	Н	
07/19/90	test (location 3)	Α	820 PSI (75% F; 25% C)
07/19/90	20 hrs @ 130 F	11	Very Humid

Set: 19 Sample: 8500(L) Comments: page 3

Materials:

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	H	Humid
07/25/90	20 hrs 0 130 F	Н	Wet to dry
07/26/90	1/2 hr 0 0 F	Н	
07/26/90	19 hrs 0 130 F	Н	
07/27/90	1/2 hr • 10 F	lł	Humid
07/27/90	22 hrs 0 130 F	Ħ	Humid
07/30/90	Test (Location 5)	<b>A</b>	
••••••			
•••••			

Set: 19 Sample: 8500(R) Comments: Control Panel

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Wipe with MEK		
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	C	
06/26/90	15 hrs 0 120-180	H	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	H	Very Humid
06/28/9C	6 hr @ 130	Н	
6/29/90	Test (Location 2)	Α	>1050 (No Failure)

Set: 19 Sample: 8500(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC M2RB47

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	C	
06/29/90	Test (Location 2)	A	O psi (15% Adhesion, 10% Cohesion, 75% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs 0 140	Н	
07/12/90	15 min 0 -300	C	Extreme Cold
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs • 130	Н	
07/13/90	2 hrs 0 620	0	
07/13/90	17 hrs • 135	Н	;
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs 0 130 F	11	
07/19/90	test (location 4)	Α	1050 PSI (90% F; 10% A)
07/19/90	20 hrs 0 130 F	· 11	Very Ilumid

Set: 19 Sample: 8500(R) Comments: page 3

Materials: MZR8-47

			•••••••••••
Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 f	H	Num i d
07/25/90	20 hrs 0 130 F	H	Wet to dry
07/26/90	1/2 hr 0 0 F	H	
07/26/90	19 hrs 0 130 F	H	
07/27/90	1/2 hr 0 10 f	Н	Hunid
07/27/90	22 hrs 0 130 F	Н	Humid
07/30/90	Test (Location 6)	٨	
	************		
	***************************************		•••••••••••••••••••••••••••••••••••••••
		••••••••	
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	•••		
		• • • • • • • • • • • • • • • • • • • •	······································

Set: 19 Sample: 8501(L) Comments:

Materials: 56% NC1 Acid, Sedium Bicarbonate, NEK, NRC Standard MARB

Date	Action	Equip	Results/Comments
06/06/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in HalfCO3		Neutralize, Dry
06/24/90	Clean		ACS Surface Preparation 451-5 min
06/25/90	Coat with MARB		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	C	
06/26/90	i hr 0 620	C	
06/26/90	1 hr 0 -110	C	
06/26/90	Send to AEDC		,
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

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## NRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8501(R) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC HZRB47

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H = Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/24/90	Clean		ACS Surface Preparation 451-5 min
06/25/90	Coat with MZR847		Brush
06/25/90	1 hr • 487	0	Cure
06/26/90	i hr 0 -120	С	
06/26/90	l hr • 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	Send to AEDC		,

Set: 19 Sample: 8502(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

0-4-	A-A-1	F1	B1A/A
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-5 min)
06/25/90	Coat with MARB		Brush
06/25/90	l hr # 487	0	Cure
06/26/90	1 hr 0 -120	C	
06/26/90	1 hr • 620	C	
06/26/90	1 hr • -110	С	
06/26/90	15 hrs # 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	٨	>1050 psi (No failure)
06/27/90	4 hrs • 120	Н	Very Humid
06/28/90	6 hr • 130	Н	·
6/29/90	Test (Location 1)	Α	>1050 (No failure)

Set: 19 Sample: 8502(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	C	
06/29/90	Test (Location 1)	٨	150 psi (40% Adhesion, 40% Cohesion, 20% Epoxy) - No Test 3rd Pull
26/29/90	3 hrs 0 600	0	
7/02/90	5 hrs • 140	Н	
07/12/90	15 min 0 -300	С	Extreme Cold
7/12/90	l hr 0 -100	С	
7/12/90	16 hrs 0 130	Н	
7/13/90	2 hrs 0 620	0	
7/13/90	17 hrs 0 135	11	
7/16/90	4 hrs 0 620	0	
7/16/90	3 hrs 0 130 f	H	
7/19/90	test (location 3)	Α	520 PSI (50% F; 30% C; 20% C; 5% dolly)
7/19/90	20 hrs • 130 F	 ll	Very Humid

Set: 19 Sample: 8502(L) Comments: page 3

Materials: MARS

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	H	Humid
07/25/90	20 hrs 0 130 F	H	Wet to dry
07/26/90	1/2 hr 0 0 f	H	
07/26/90	19 hrs 0 130 F	H	
07/27/90	1/2 hr 0 10 F	Н	Humid
07/27/90	22 hrs 0 130 F	Н	Humld
07/30/90	Test (Location 5)	A	
		*****	
*********			
*********			

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#### MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8502(R) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

0.44	Antina		Danilla /Campana
Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-5 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr ● 487	0	Cure
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	l hr 0 -110	С	
06/26/90	15 hrs 0 120-180	Н	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	Ħ	Very Humid
06/28/90	6 hr 0 130	Н	
6/29/90	Test (Location 2)	A	>1050 (No Failure)

Set: 19 Sample: 8502(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	С	
06/29/90	Test (Location 2)	٨	50 psi (10% Adhesion, 90% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs 0 140	Н	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs 0 130	Н	
07/13/90	2 hrs <b>0</b> 620	0	
07/13/90	17 hrs 0 135	Н	
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs # 130 F	Н	
07/19/90	test (location 4)	<b>A</b>	920 PSI (90% F; 10% dolly) pinhole
07/19/90	20 hrs 0 130 F	H	Very Humid

Set: 19 Sample: 8502(R) Comments: page 3

Materials: MZRB-47

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	Н	Humid
07/25/90	20 hrs 0 130 F	Н	Wet to dry
07/26/90	1/2 hr 0 0 F	Н	
07/26/90	19 hrs 0 130 F	Н	
07/27/90	1/2 hr 0 10 F	H	Humid
07/27/90	22 hrs 0 130 F	H '	Humid
07/30/90	Test (Location 6)	A	
	•••••••••••		
			***************************************
			•••••••••••••••••••••••••••••••••••••••
*******			

Set: 19

Sample: 8503(L)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3	******	Neutralize, Dry
06/25/90	Surface Preparation		ACS (453-3P-1C-5 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs • 120-180	Н	Humid to Dry
06/27/90	Test (Location 1)	Α	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	H	Very Humid
06/28/90	6 hr 0 130	Ħ	
6/29/90	Test (Location 1)	Α	>1050 (No Failure)

# AEUC-1H-92-2

## MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8503(L) Comments: Page 2

Haterials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	С	
06/29/90	Test (Location 1)	<b>A</b>	50 psi (30% Adhesian, 20% Cohesian, 50% Epaxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs • 140	H	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	l hr 0 -100	С	
07/12/90	16 hrs • 130	Н	
07/13/90	2 hrs <b>0</b> 620	0	
07/13/90	17 hrs 0 135	Н	
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs 0 130 F	H	
07/19/90	test (location 3)	A	720 PSI (70% F; 30% C)
07/19/90	20 hrs <b>0</b> 130 F	Н	Very Humid

Set: 19 Sample: 8503(L) Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	H	Humid
07/25/90	20 hrs 0 130 F	H	Wet to dry
07/26/90	1/2 hr 0 0 F	Н	
07/26/90	19 hrs 0 130 F	Н	
07/27/90	1/2 hr 0 10 F	H	Humid
07/27/90	22 hrs 0 130 F	Н	Humid
07/30/90	Test (Location 5)	A	
	***************************************	••••••	
**********			•
	••••••••••		

Set: 19 Sample: 8503(R) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Surface Preparation		ACS (453-3P-1C-5 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	C	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs @ 120-180	Н	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	Н	Very Humid
06/28/90	6 hr 0 130	#	
6/29/90	Test (Location 2)	Α	>1050 (No Failure)

Set: 19 Sample: 8503(R) Comments: page 3

Materials: MZRB-47

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	H	Humid
07/25/90	20 hrs 0 130 F	H	Wet to dry
07/26/90	1/2 hr 0 0 f	Н	
07/26/90	19 hrs 0 130 F	Н	
07/27/90	1/2 hr 0 10 F	Н	Humid
07/27/90	22 hrs 0 130 F	H	Humid
07/30/90	Test (Location 6)	٨	>1000 PSI
	******************		
	••••••••		
*******	******************		
	***********		

Set: 19 Sample: 8504(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Surface Preparation		ACS (454-10T-3P-5 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	С	•••••••••••••••••••••••••••••••••••••••
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs @ 120-180	H	flumid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs # 120	H	Very Humid
06/28/90	6 hr 0 130	#	
6/29/90	Test (Location 1)	Α	>1050 (No failure)

Set: 19 Sample: 8504(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	С	
06/29/90	Test (Location 1)	٨	100 psi (30% Adhesion, 20% Cohesion, 50% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs 0 140	Н	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	1 hr 9 -100	С	
07/12/90	16 hrs 0 130	Н	
07/13/90	2 hrs <b>0</b> 620	0	
07/13/90	17 hrs 0 135	11	
07/16/90	4 hrs • 620	0 .	
07/16/90	3 hrs 0 130 F	H	
07/19/90	test (location 3)	۸	1050 PSI (80% F; 10% C; 10% dolly)
07/19/90	20 hrs • 130 f	H	Very Humid

Set: 19

Sample: 8504(L)

Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	н	Humid
07/25/90	20 hrs 0 130 F	Н	Wet to dry
07/26/90	1/2 hr 0 0 f	Н	
07/26/90	19 hrs 0 130 F	H	
07/27/90	1/2 hr 0 10 F	Н	Hunid
07/27/90	22 hrs 0 130 F	Н	Humid
07/30/90	Test (Location 5)	, <b>V</b>	1000 PSI (70% C; 20% F; no rust)
********	• • • • • • • • • • • • • • • • • • • •		
			·
• • • • • • • • • • • • • • • • • • • •	••••••		

Set: 19 Sample: 8504(R) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

			***************************************
Date	Action	Equip	Results/Comments .
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Surface Preparation		ACS (454-10T-3P-5 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 0 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs 0 120-180	Н	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	11	Very illumid
06/28/90	6 hr <b>0</b> 130	11	
6/29/90	Test (Location 2)	A	>1050 (No Failure)
	••		

Set: 19 Sample: 06C19-8504(R) Comments: Page 2

Naterials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	C	
06/29/90	Test (Location 2)	Α	150 psi (20% Adhesion, 30% Cohesion, 50% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs <b>0</b> 600	0	
07/02/90	5 hrs 0 140	H .	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs 0 130	H	
07/13/90	2 hrs 0 620	0	
07/13/90	17 hrs 0 135	Н	
07/16/90	4 hrs 0 620	0	***************************************
07/16/90	3 hrs 0 130 F	Н	
07/19/90	test (location 4)	Α	1050 PSI (90% F; 5% C; 5% dolly)
07/19/90	20 hrs 0 130 F	11	Very Humid

Set: 19 Sample: 8504(R) Comments: page 3

Materials: MZRB-47

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	H	Humid
07/25/90	20 hrs 0 130 F	H	Wet to dry
07/26/90	1/2 hr • 0 F	Н	`
07/26/90	19 hrs 0 130 F	H	
07/27/90	1/2 hr 0 10 F	Н	Humid
07/27/90	22 hrs 0 130 F	H	Humtd
07/30/90	Test (Location 6)	A	>1050
	***************		
**********		•	

## 3

## MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8505(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Hill Scale
06/08/90	Dip in NaHCO3		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-10 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	С	
06/26/90	1 hr 🗣 620	С	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs 0 120-180	н	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	Н	Very Humid
06/28/90	6 hr 0 130	H	
6/29/90	Test (Location 1)	Α	>1050 (No Failure)

Set: 19 Sample: 8505(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120		
06/29/90	Test (Location 1)	A	100 psi (15% Adhesion, 35% Cohesion, 30% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs 0 140	Н	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	1 hr 0 -100	C	
07/12/90	16 hrs 9 130	H	
07/13/90	2 hrs 0 620	0	
07/13/90	. 17 hrs 0 135	Н	
07/16/90	Test (Location 3)	A	>1050 psi (100% Epoxy Failure)
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs 0 130 F	11	
07/19/90	test (location 5)	A	1000 PSI (45% F; 50% C; 5% dolly)
07/19/90	20 hrs 0 130 F	11	Very Ilumid

Cat: 19 Sample: 8505(L) Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 f	Н	Humid
07/25/90	20 hrs <b>0</b> 130 f	H	Wet to dry
07/26/90	1/2 hr 0 0 F	Н	
07/26/90	19 hrs 0 130 F	H	
07/27/90	1/2 hr 0 10 F	H	Humid
07/27/90	22 hrs # 130 F	Н	Humid
07/30/90	Test (Location 7)	A	1000 PSI (60% C; 40% F)

Set: 19 Sample: 8505(R) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO3	*******	Neutralize, Dry
.06/25/90	Surface Preparation	*****	ACS (452-5P-10 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr 0 487	0	Cure
06/26/90	1 hr 0 -120	C	
06/26/90	1 hr 0 620	C	
06/26/90	1 hr 0 -110	С	
06/26/90	15 hrs # 120-180	Н	Humid to Dry
06/27/90	Test (Location 2)	Α	>1050 psi (No Failure)
06/27/90	4 hrs 0 120	Н	Very Humid
06/28/90	6 hr • 130	Н	
6/29/90	Test (Location 2)	Α	>1050 (No Failure)

Set: 19 Sample: 8505(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	С	
06/29/90	Test (Location 2)	٨	100 psi (15% Adhesion, 25% Cohesion, 60% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs • 140	Н	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs 0 130	H	
07/13/90	2 hrs 0 620	0	
07/13/90	17 hrs 0 135	H	
07/16/90	Test (Location 4)	Α	>1050 (No Failure)
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs 0 130 F	Н	
07/19/90	test (location 6)	Α	920 PSI (100% F)
07/19/90	20 hrs 0 130 F	#	Very Humid

Set: 19 Sample: 8505(R) Comments: page 3

Materials: MZR8-47

Date	Action	Equip	Results/Comments
07/20/90	5 hrs 0 140 F	Н	Humid
07/25/90	20 hrs 0 130 F	Н	Wet to dry
07/26/90	1/2 hr • 0 F	Н	
07/26/90	19 hrs • 130 F	Н	
07/27/90	1/2 hr 0 10 F	Н	Humid
07/27/90	22 hrs 0 130 F	H	Humid
07/30/90	Test (Location 8)	A	720 PSI (90% F; 9% C; 1% A rust)
	**********************		
******			
	•		
********			

Set: 20

Sample: 8601

Comments: 1 dots

Haterials: MARB

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	Н	
08/16/90	Clean		Consultant gel both sides
08/16/90	Coat	-	Brush - thin MARB ^
08/17/90	Coat		Brush - thin topcoat MARB ^
08/20/90	1 hr • 480 F	0	Oven cure Bake slowly
08/20/90	16 hrs 0 160 F	Н	Humid
08/21/90	1 hr 0 -100 F	С	Cold
08/21/90	16 hrs 0 120 F	Н	Humid
08/22/90	1 hr 0 -100 f	С	Autocycle cold
08/22/90	1 hr 0 600 F	С	Autocycle hot
08/22/90	15 hrs 0 125 F	Н	Humid
08/23/90	1 hr 0 -100 F	C	Autocycle cold

Set: 20 Sample: 8601 Comments: 1 dots, Page 2

Materials: MARB

Date	Action	Equip	Results/Comments	
08/23/90	1 hr • 600 F	С	Autocycle hot	Stroke, cracking, pinhole rust
08/23/90	15 hrs 0 125 F	Н		
08/28/90	22 hrs 0 125 F	Н		
08/29/90	5 hrs 0 600 F	0		
08/29/90	14 hrs 0 125 F	H		`
08/30/90	4 hrs 0 600 F	0		
09/05/90	1 hr 0 -100 f	С		
09/05/90	16 hrs 0 125 F	H	*	
09/06/90	3 hrs 0 600 F	0		
09/06/90	15 hrs 0 125 F	H Hu	mid to dry	
09/07/90	1 hr 0 -125 f	C Au	tocycle	
09/07/90	1 hr 0 800 F	C Mai	nual HIGH heat	
09/11/9r	1 hr 0 -100 F	C		

Set: 20 Sample: 8601 Comments: page 3

Materials: MARB

Date	Action	Egutp	Results/Comments
09/11/90	1 hr 0 590 F	C	
09/12/90	1 hr 0 -100 f	C	
09/12/90	3 hrs 0 600 F	0	
09/12/90	16 hrs 0 125 F	Н	
09/13/90	21 hrs 0 125 F	Н	very humid
09/14/90	l hr 0 -100 F	C	
09/18/90	1 hr 0 -100 F	C	
09/18/90	1 hr 0 600 F	0	
09/19/90	1 hr 0 15 F	Н	
09/19/90	21 hrs 0 130 F	Н	
09/20/90	Test (Location 1)	A	650 PSI (98% C)
09/24/90	3 hrs @ 600 F	0	
09/24/90	13 hrs • 120 F	H	•

Set: 20 Sample: 8601 Comments: page 4

Materials: MARB

Equip De	finitions:	0 - Oven; C -	Heat/Cooling	Chamber; H	l - Humid	ity Chamber;	A -	Adhesion T	ester
----------	------------	---------------	--------------	------------	-----------	--------------	-----	------------	-------

Date	Action	Equip	Results/Comments	
09/25/90	1 hr 0 487 F	0		
09/25/90	16 hrs 0 120 F	H		
09/26/90	3 hrs 0 600 F	0		
09/27/90	40 hrs 0 120 F	Н		
09/29/90	Test (Location 2)	. A	750 PSI (100% C) Use panel for repair tests	• • -
******				•••
*******				
				<b>-</b>
				<b></b> -
********		• • • • • • • • • • • • • • • • • • • •		
		• • • • • • • • • • • • • • • • • • • •		. <b>.</b> .
••••••	*******			

Set: 20

Sample: 8602

Comments: 2 dots

Materials: MARB

Date	Action	Equip	Results/Comments
07/09/90	Acid clean		Remove mill scale, both sides of panel
07/25/90	Medium rusting	Н	
08/16/90	Clean	-	Consultant gel both sides
08/16/90	Coat	-	Brush - thin MARB ^
08/17/90	Coat		Brush - thin topcoat MARB <> Too thick
08/20/90	1 hr • 480 F	0	Oven cure Bake slowly
08/20/90	16 hrs • 160 F	Н	Humid
08/21/90	l hr 0 -100 F	C ·	Cold
08/21/90	16 hrs • 120 F	H	liumid
08/22/90	1 hr 0 -100 F	С	Autocycle cold
08/22/90	1 hr 0 600 f	С	Autocycle hot
08/22/90	15 hrs 0 125 F	Н	Humid
08/23/90	1 hr 0 -100 F	С	Autocycle cold undercoat rusting; debris

Set: 20 Sample: 8602

Comments: 2 dots, Page 2

Materials: MARB

Date	Action	Equip	Results/Comments	
08/23/90	1 hr 0 600 F	C	Autocycle hot	
08/23/90	15 hrs 0 125 F	H		
08/28/90	22 hrs 0 125 F	Н		
08/29/90	5 hrs 0 600 F	0	********************	
08/29/90	14 hrs 0 125 F	Н		·
08/30/90	4 hrs 0 600 F	0		
09/05/90	1 hr 0 -100 F	C		
09/05/90	16 hrs 0 125 F	Н		
09/06/90	3 hrs # 600 F	0		
09/06/90	15 hrs • 125 F	H	llumid to dry	
09/07/90	1 hr 0 -125 F	С	Autocycle	
09/07/90	1 hr 0 800 F	C	Manual HIGH heat	
09/29/90	Test (Location 1)	٨	400 PSI (100% C)	Use panel for repair testing

Materials: MARB

Date	Action	Equip	Results/Comments
07/09/90	Acid clean		Remove mill scale, both sides of panel
07/25/90	Medium rusting	Н	***************************************
08/16/90	Clean	•	Consultant gel, both sides
08/16/90	Coat	-	Brush - thin MARB ^
08/17/90	Coat	-	Brush - thin topcoat MARB <>
08/20/90	1 hr 0 480 F	0	Oven cure Bake slowly
08/20/90	16 hrs 0 160 F	. Н	liumid
08/21/90	1 hr 0 -100 F	С	Cold
08/21/90	16 hrs • 120 F	Н	tiumid
08/22/90	1 hr 0 -100 F	С	Autocycle cold
08/22/90	1 hr 0 600 F	С	Autocycle hot
08/22/90	15 hrs 0 125 F	Н	Humid
08/23/90	1 hr 0 -100 F	С	Autocycle cold Brush stroke failures; rust debris

Set: 20

Sample: 8603

Comments: 3 dots, Page 2

Materials: MARB

Date	Action	Equip	Results/Comments
08/23/90	1 hr 0 600 F	C	Autocycle hot
08/23/90	15 hrs 0 125 F	Н	
08/28/90	22 hrs 0 125 F	H	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs 0 125 F	H	
08/30/90	4 hrs 0 600 F	0	
09/05/90	1 hr 0 -100 F	С	
09/05/90	16 hrs 0 125 F	Н	
09/06/90	3 hrs 0 600 F	0	too thick; very little failure
09/06/90	15 hrs <b>0</b> 125 F	H	Humid to dry
09/07/90	1 hr 0 -125 F	C	Autocycle
09/07/90	1 hr 0 800 F	C	Manual HIGH heat
09/20/90	Test (Location 1)	٨	550 PSI (100% C)

## 213

# AEDC-TR-92-2

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8603

Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
09/24/90	3 hrs 0 600 F	0	
09/24/90	13 hrs <b>0</b> 120 F	H	
09/25/90	1 hr 0 487 F	0	
09/25/90	16 hrs # 120 F	Н	
09/26/90	3 hrs 0 600 F	0	
09/27/90	40 hrs • 120 F	Н	
09/29/90	Test (Location 2)	٨	320 PSI (90% C; 10%) Use panel for repair testing
11/08/90	89 hrs 0 140 F	Н	very humid
01/14/91		••••••	See 9203 - cracking evident before coating removal
*******			
	••••••		

Set: 20

Sample: 8701

Comments: 4 dats

Materials: MARB

Date	Action	Equip	Results/Comments	
07/09/90	Acid clean	-	Remove mill scale, both sides of panel	^****************
07/25/90	Medium rusting	Н		
08/16/90	Clean	-	Consultant gel, backside left rusty See Vufoil	1246.8g
08/16/90	Coat	-	Brush - thin MARB ^	1248.0g
08/17/90	Coat	-	Brush - thin topcoat MARB <>	1248.7g
08/20/90	l hr ● 480 F	0	Oven cure Bake slowly	
08/20/90	16 hrs 0 160 F	Н	Humid	
08/21/90	1 hr 0 -100 F	С	Cold	
08/21/90	16 hrs 0 120 F	Н	Humid	
08/22/90	1 hr 0 -100 F	С	Autocycle cold	
08/22/90	l hr 0 600 F	С	Autocycle hot	
08/22/90	15 hrs 0 125 F	#	Humid	
08/23/90	l hr 0 -100 F	С	Autocycle cold Failures at vel	lum spots

## 21:

#### MRC Fabrication/Conditioning/Test Form 90-1

Set: 20 Sample: 8701 Comments: 4 dots, Page 2

Materials: MARB

Date A	Action		Equ	ip Results/Comments
08/23/90	l hr 0	600	F C	Autocycle hot
08/23/90 1	5 hrs 0	125	F N	······································
08/28/90 2	22 hrs 0	125	F H	·
08/29/90	5 hrs 0	600	F 0	
08/29/90 1	14 hrs 0	125	F H	·
08/30/90	4 hrs 0	600	F 0	
09/05/90 1	hr 0 -1	00 F	C	
09/05/90 1	6 hrs 0	125	F H	
09/06/90 3	hrs 0 6	00 F	0	
09/06/90 1	5 hrs 0	125	F H	Humid to dry
09/07/90 1	hr 0 -1	25 F	C	Autocycle
09/07/90 1	hr 0 80	0 F	C	Manual HIGH heat
09/11/90 1	hr 0 -1	00 F	C	autocycle

Set: 20 Sample: 8701 Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
09/11/90	1 hr 0 590 F	С	
09/12/90	1 hr 0 -100 f	С	
09/12/90	3 hrs 0 600 F	0	
09/12/90	16 hrs 0 125 F	11	
09/13/90	21 hrs 0 125 F	H	very humid
09/14/90	1 hr • -100 F	С	
09/18/90	1 hr 0 -100 F	С	
09/18/90	1 hr • 600 F	0	
09/18/90	1 hr 0 15 f	Н	
09/19/90	21 hrs 0 130 F	Н	
09/20/90	Test (Location 1)	A	350 PSI (100% C/I)
09/24/90	3 hrs 0 600 F	0	
09/24/90	13 hrs 0 120 F	H	

Set: 20 Sample: 8701 Comments: page 4

Materials: MARB

Date	Action	Equip	Results/Comments
09/25/90	1 hr <b>0</b> 487 F	0	
09/25/90	16 hrs 0 120 F	H	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
09/26/90	3 hrs	0	
09/27/90	40 hrs 0 120 F	Н	
09/29/90	Test (Location 2)	Α	120 PSI (100% C) Use panel for repair testing
01/14/91	•		See panel 9201
*******			
*********			

Set: 20

Sample: 8702

Comments: 5 dots

Materials: MARB

Date	Action	Equip	Results/Comments	
07/09/90	Acid clean	-	Remove mill scale, both sides of panel	
07/25/90	Medium rusting	H		***************************************
08/16/90	Clean	-	Consultant gel, backside left rusty See Vufoil	1276.6g
08/16/90	Coat	-	Brush - thin MARB ^	1277.5g
08/17/90	Coat	-	Brush - thin topcoat MARB <>	1278.9g
08/20/90	1 hr 0 480 F	0	Oven cure Bake slowly	***************************************
08/20/90	16 hrs • 160 F	H	Humid	***********
08/21/90	1 hr 0 -100 F	С	Cold	
08/21/90	16 hrs ● 120 F	H	Humid	
08/22/90	1 hr 0 -100 F	C	Autocycle cold	
08/22/90	l hr 0 600 F	C	Autocycle hot	•••••••••••
08/22/90	15 hrs 0 125 F	H	Humid	
08/23/90	l hr 0 -100 F	C	Autocycle cold	Failures at vellum spots

Set: 20 Sample: 8702 Comments: 5 dots, Page 2

Materials: MARB

Date	Action	Equip	Results/Comments
08/23/90	1 hr 0 600 F	С	Autocycle hot
08/23/90	15 hrs 0 125 f	Н	
08/28/90	22 hrs 0 125 F	Н	
08/29/90	5 hrs • 600 F	0	
08/29/90	14 hrs 0 125 F	н	
08/30/90	4 hrs 0 600 F	0	
09/05/90	1 hr 0 -100 F	C	
09/05/90	16 hrs 0 125 F	Н	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	H Hu	mid to dry
09/07/90	1 hr 0 -125 F	C Au	tocycle
09/07/90	1 hr 0 800 F	C Ma	inual HIGH heat Stop testing/ Failures at vellum spots
09/29/90	Test (Location 1)	A 50	0 PSI (100% C) Use panel for repair testing_ 9202

Set: 20 Sample: 8703 Comments: 0 dots

Naterials: MARB

Date	Action	Equip	Results/Comments .	
07/09/90	Acid clean	•	Remove mill scale, both sides of panel	
07/25/90	Medium rusting	H		
06/16/90	Clean	-	Consultant gel, backside left rusty See Vufoil	1235.0g
08/16/90	Coat	-	Brush - thin MARB <>	1236. <b>2</b> g
08/17/90	Coat	-	Brush - thin topcoat MARB <>	1236.8g
08/20/90	1 hr 0 480 F	0	Oven cure Bake slowly	
08/20/90	16 hrs • 160 F	li	Humid	
08/21/90	1 hr 0 -100 F	С	Cold	
08/21/90	16 hrs • 120 F	И	Humid	
08/22/90	1 hr 0 -100 F	С	Autocycle cold	
08/22/90	1 hr 0 600 f	С	Autocycle hot	
08/22/90	15 hrs 0 125 F	Н	Humid	
08/23/90	1 hr 9 -100 F	C	Autocycle cold Failures at vellum spot	•

Comments: 0 dots, Page 2

Materials: MARB

Date	Action	Equip	Results/Comments
08/23/90	1 hr 0 600 F	C	Autocycle hot
08/23/90	15 hrs 0 125 F	Н	
08/28/90	22 hrs 0 125 F	Н	
08/29/90	5 hrs 0 600 F	0	***************************************
08/29/90	14 hrs 0 125 F	Н	
08/30/90	4 hrs 0 600 F	0	·
09/05/90	1 hr 0 -100 F	С	
09/05/90	16 hrs 0 125 F	H	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	H	Humid to dry
09/07/90	1 hr 0 -125 F	C	Autocycle
09/07/90	1 hr 0 800 F	С	Manual HIGH heat
09/20/90	Test (Location 1)	Α	150 PSI (98% C/I)

Set: 20 Sample: 8703 Comments: 0 dots, Page 3

Naterials: NARB

Date	Action	Equip	Results/Comments
09/24/90	3 hrs 0 600 F	0	hot
09/24/90	16 hrs 0 120 F	Н	
09/25/90	1 hr 0 487 f	0	slowly
09/25/90	16 hrs 0 120 F	Н	
09/26/90	3 hrs 0 600 F	0	`
09/27/9G	40 hrs 0 120 F	H	
09/29/90	Test (Location 2)	٨	100 PSI (100% C - 5% rusty)
			Use panel for repair testing
11/08/90	89 hrs 0 140 F	Н	very humid
		*	
	•••••••••		
	*****************		

Set: 1-21 Sample: 8801 Comments:

Materials: MARB

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	Н	Mild
08/07/90	Clean	•	Glass Bead Etch
08/07/90	Coat		Brush two coats MARB <1 mil wet
08/08/90	1 hr 0 487 F	0	Slowly to cure
08/10/90	1 hr 0 -110 F	С	Cold autocycle
08/10/90	1 hr 0 600 F	С	Hot autocycle
08/13/90	1 hr 0 -100 F	C	Cold
08/14/90	1 hr 0 -100 F	С	Cold autocycle
08/14/90	1/2 hr 0 600 F	С	Hot altered autocycle
08/16/90	5 hrs 0 140 F	Н	Humid
08/17/90	1/2 hr 0 20 F	Н	
08/17/90	3 hrs 0 130 f	 11	

Set: I-21 Sample: 8801 Comments: Page 2

Naterials: MARB

Date	Action	Equip	Results/Comments
08/20/90	16 hrs 0 160 f	H	
08/21/90	1 hr 0 -100 F	C	
08/21/90	16 hrs 0 120 f	H	
08/22/90	1 hr 0 -100 F	С	
08/22/90	1 hr 0 600 F	С	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr 0 -100 F	С	
08/23/90	1 hr 0 600 F	С	
08/23/90	15 hrs • 125 F	H	
08/28/90	22 hrs 0 125 f	H	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs 0 125 F	Н	
08/30/90	4 hrs 0 600 F	0	

Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
09/05/90	1 hr 0 -100 F	C	Autocycle
09/05/90	16 hrs 0 125 F	Н	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	Н	Humid to dry
09/07/90	1 hr 0 -125 F	C	Autocycle
09/07/90	1 hr 0 800 F	С	Manual HIGH heat
	•••••		1
		••••••	
•••••			
	***************************************		

Set: 1-21 Sample: 8802 Comments:

Materials: MARB

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	Н	Hild
08/07/90	Clean	-	Glass Bead Etch
08/07/90	Coat	-	Brush two coats MARB <1 mil wet
08/08/90	1 hr 0 487 f	0	Slowly to cure
08/10/90	1 hr 0 -110 F	С	Cold autocycle
08/10/90	1 hr 0 600 f	С	Hot autocycle
08/13/90	1 hr 0 -100 F	С	Cold
08/14/90	1 hr 0 -100 F	С	Cold autocycle
08/14/90	1/2 hr 0 600 F	С	Hot altered autocycle
08/16/90	5 hrs 0 140 F	H	Humid
08/17/90	1/2 hr 0 20 F	Н	•
08/17/90	3 hrs 0 130 F	Н	

Set: I-21 Sample: 8802 Comments: Page 2

Materials: MARB

Date	Action	Equip	Results/Comments
08/20/90	16 hrs <b>0</b> 160 F	Н	
08/21/90	1 hr 0 -100 F	C	
08/21/90	16 hrs 9 120 F	Н	
08/22/90	1 hr 0 -100 F	C	
08/22/90	1 hr 0 600 F	C	,
08/22/90	15 hrs 125 F	Н	
08/23/90	1 hr 0 -100 F	C	
08/23/90	1 hr 0 600 F	С	
08/23/90	15 hrs <b>0</b> 125 F	Н	
08/28/90	22 hrs <b>0</b> 125 F	Н	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs 0 125 F	Н	
08/30/90	4 hrs @ 600 F	0	·

Set: 1-21

Sample: 8802

Comments: page 3

Materials: MARB

Date	Action	Equip	Results/Comments
09/05/9J	1 hr 0 -100 F	С	Autocycle
09/05/90	16 hrs 0 125 F	Н	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	Н	Humid to dry
09/07/90	1 hr 0 -125 F	C	Autocycle
09/07/90	I hr € 800 F	C	Manual HIGH heat
			· 
			•••••

Sample: 8803

Comments:

Materials: MARB

Date	Action	Equip	Results/Comments
07/03/90	Acid clean		Remove mill scale both sides of panel
07/06/90	Rusting	Н	Mild
08/07/90	Clean		Glass Bead Etch
08/07/90	Coat	-	Brush coat MARB <1 mil wet /2nd coat wipe on
08/08/90	1 hr 0 487 F	0	Slowly to cure
08/10/90	1 hr 0 -110 F	С	Cold autocycle
08/10/90	1 hr 0 600 f	С	Hot autocycle
08/13/90	1 hr 0 -100 F	С	Cold
08/14/90	1 hr 0 -100 F	С	Cold autocycle
08/14/90	1/2 hr 0 600 F	С	liot altered autocycle
08/16/90	5 hrs 0 140 F	Н	Humid
08/17/90	1/2 hr 0 20 F	Н	
08/17/90	3 hrs 0 130 F	·	

Set: I-21 Sample: 8803 Comments: Page 2

Materials: MARB

0-4-	A.A.I	Caula	0 1. 1. 6
Date	Action	Equip	Results/Comments
08/20/90	16 hrs 0 160 F	H	
08/21/90	1 hr 0 -100 F	C	
08/21/90	16 hrs • 120 F	H	
08/22/90	1 hr 0 -100 F	C	
08/22/90	1 hr 0 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr 0 -100 F	С	
08/23/90	1 hr 0 600 F	С	
08/23/90	15 hrs • 125 F	H	
08/28/9ύ	22 hrs • 125 F	H	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs 0 125 F	Н	
08/30/90	4 hrs 0 600 F	0	

Set: I-21 Sample: 8803 Comments: page 3

Materials: MARB

Equip Definitions: 0 - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
09/05/90	1 hr 0 -100 F	С	Autocycle
09/05/90	16 hrs 0 125 F	Н	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	Н	Humid to dry
09/07/90	1 hr 0 -125 F	С	Autocycle
09/07/90	1 hr ● 800 F	·C	Manual HIGH heat
09/20/90	Test (Location 1)	٨	>1050 No Failure Knock off 100% C
09/24/90	3 hrs 0 600 F	0	
09/24/90	13 hrs 0 120 F	Н	·
09/25/90	1 hr • 487 F	0	
09/25/90	16 hrs 0 120 F	11	
09/26/90	3 hrs 0 600 F	0	***************************************
09/27/90	40 hrs @ 120 F	11	***************************************

Set: 1-21

Sample: 8803

Comments: page 4

Materials: MARB-47

Equip Definitions:	O - Oven; C	<ul> <li>Heat/Cooling Ch</li> </ul>	amber; H =	Humidity Chamber;	A - Adhesion Tester
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Date	Action	Equip	Results/Comments
09/29/90	Test (Location 2)	٨	420 PSI (95% C; 5% A - rust)
	******		
			•••••••••••••••••••••••••••••••••••••••
••••••			
********		**************************************	
******			•••••
	•••••		

Set: 1-21 Sample: 8901 Comments:

Materials: MZRB-80

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	Н	Hild
08/07/90	Clean	-	Consultant gel 11F3-10 min
08/07/90	Coat	-	Brush three thin coats. MZRB-80
08/08/90	1 hr 0 487 F	0	Slowly to cure
08/10/90	1 hr 0 -110 F	C	Cold autocycle
08/10/90	1 hr 0 600 F	С	Hot autocycle
08/13/90	1 hr 0 -100 F	С	Cold
08/14/90	1 hr 0 -100 F	С	Cold autocycle
08/14/90	1/2 hr 0 600 F	С	Hot altered autocycle
08/16/90	5 hrs 0 140 F	Н	Humid
08/17/90	1/2 hr 0 20 F	Н	
08/17/90	3 hrs 0 130 F	H	

Set: I-21 Sample: 8901 Comments: Page 2

Materials: MZR8-80

Date	Action	Equip	Results/Comments
08/20/90	16 hrs 0 160 F	Н	
08/21/90	1 hr 0 -100 F	C	
08/21/90	16 hrs 0 120 F	Н	
08/22/90	1 hr 0 -100 F	C	
08/22/90	1 hr 0 600 F	C	`
08/22/90	15 hrs 125 F	Н	
08/23/90	1 hr 0 -100 F	C	
08/23/90	1 hr 0 600 F	C	
08/23/90	15 hrs 0 125 F	Н	
08/28/90	22 hrs 0 125 F	Н	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs 0 125 f	Н	
08/30/90	4 hrs 0 600 F	0	

Set: [-2]

Sample: 8901

Comments: page 3

Materials: MZRB-80

Date	Action	Equip	Results/Comments
<b>09/05/9</b> J	1 hr 0 -100 F	С	Autocycle
09/05/90	16 hrs 0 125 F	H	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	Н	Humid to dry
09/07/90	1 hr 0 -125 F	C	Autocycle
09/07/90	1 hr 0 800 F	С	Manual HIGH heat
*******			
	***************************************		
•••••			

Set: I-21 Sample: 8902 Comments:

Materials: MZR8-80

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	*	Remove mill scale both sides of panel
07/06/90	Rusting	Н	Mild
08/07/90	Clean	-	Consultant gel 11F3-10 min
08/07/90	Coat	***********	Brush three thin coats MZRB-80
08/08/90	1 hr 0 487 F	0	Slowly to cure
08/10/90	1 hr 0 -110 F	С	Cold autocycle
08/10/90	1 hr 0 600 f	С	Hot autocycle
08/13/90	1 hr 0 -100 F	С	Cold
08/14/90	1 hr 0 -100 F	C	Cold autocycle
08/14/90	1/2 hr 0 600 F	С	Hot altered autocycle
08/16/90	5 hrs 0 140 F	H	Humid
08/17/90	1/2 hr # 20 F	Н	
08/17/90	3 hrs 0 130 F	H	

Set: I-21 Sample: 8902 Comments: Page 2

Materials: MZRB-80

Date	Action	Equip	Results/Comments
08/20/90	16 hrs 0 160 F	Н	
08/21/90	1 hr 0 -100 F	C	
08/21/90	16 hrs 0 120 F	Н	
08/22/90	1 hr 0 -100 F	. С	
08/22/90	1 hr 0 600 F	C	
08/22/90	15 hrs 125 F	Н	
08/23/90	1 hr 0 -100 F	С	
08/23/90	1 hr 0 600 F	С	
08/23/90	15 hrs 0 125 F	Н	
08/28/90	22 hrs 0 125 F	Н	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs 0 125 F	Н	
08/30/90	4 hrs 0 600 F	0	

Set: I-21

Sample: 8902

Comments: page 3

Materials: NZRB-80

Date	Action	Equip	Results/Comments
09/05/90	l hr 0 -100 F	С	Autocycle
09/05/90	16 hrs 0 125 F	H	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 F	Н	Humid to dry
09/07/90	1 hr 0 -125 F	С	Autocycle
09/07/90	i hr 0 800 f	C	Manual HIGH heat
+			
		•••••	
			•••••••••••••••••••••••••••••••••••••••
	••••••		

Sample: 8903

Comments:

Materials: MZRB-80

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Consultant gel 11F3-10 min
08/07/90	Coat	-	Brush three thin coats MZRB-80 Too thick
08/08/90	1 hr 0 487 F	0	Slowly to cure
08/10/90	1 hr 0 -110 F	С	Cold autocycle
08/10/90	1 hr 0 600 F	C	Hot autocycle
08/13/90	1 hr 0 -100 F	С	Cold
08/14/90	1 hr 0 -100 F	С	Cold autocycle
08/14/90	1/2 hr 0 600 F	С	Hot altered autocycle
08/16/90	5 hrs 0 140 F	Н	Humid
08/17/90	1/2 hr 0 20 F	Н	
08/17/90	3 hrs 0 130 F	H	

## AEDC-TR-92-23

#### MRC Fabrication/Conditioning/Test Form 90-1

Set: 1-21

Sample: 8903

Comments: Page 2

Materials: MZRB-80

Date	Action	Equip	Results/Comments
08/20/90	16 hrs 0 160 f	H	
08/21/90	1 hr 0 -100 F	С	
08/21/90	16 hrs 0 120 F	Н	
08/22/90	1 hr 0 -100 F	С	
08/22/90	1 hr 0 600 F	С	`
08/22/90	15 hrs 125 F	Н	
08/23/90	1 hr 0 -100 F	С	·
08/23/90	1 hr 0 600 F	С	•
08/23/90	15 hrs 0 125 F	Н	
08/28/90	22 hrs 0 125 F	H	
08/29/90	5 hrs 0 600 F	0	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs 0 600 F	0	

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Set: I-21 Sample: 8903 Comments: page 3

Materials: MZRB-80

Date	Action	Equip	Results/Comments
09/05/90	1 hr 0 -100 F	Ċ	Autocycle
09/05/90	16 hrs 0 125 F	Н	
09/06/90	3 hrs 0 600 F	0	
09/06/90	15 hrs 0 125 f	Н	Humid to dry
09/07/90	1 hr 0 -125 F	С	Autocycle
09/07/90	1 hr 0 800 F	C	Manual HIGH heat
09/11/90	1 hr 0 -100 F	· c	
09/11/90	1 hr 0 590 F	С	
09/12/90	1 hr 0 -100 F	С	
09/12/90	3 hrs 0 600 F	0	
09/12/90	16 hrs 0 125 F	H	
09/13/90	21 hrs 0 125 F	Н	very humid
09/14/90	1 hr 0 -100 F	С	

Set: I-21 Sample: 8903 Comments: page 4

Materials: MZRB-80

Date	Action	Equip	Results/Comments
09/18/90	1 hr 0 -100 F	С	
09/18/90	1 hr 0 600 F	0	
09/19/90	1 hr 0 15 F	Н	
09/19/90	21 hrs 0 130 f	Н	·
09/20/90	Test (Location 1)	٨	200 PSI (100% C/I)
09/24/90	3 hrs 0 600 F	0	
09/24/90	13 hrs 0 120 F	Н	
09/25/90	1 hr 0 487 F	0	
09/25/90	16 hrs 0 120 F	Н	
09/26/90	3 hrs 0 600 F	0	
09/27/90	40 hrs 0 120 F	Н	
09/29/90	Test (Location 2)	Α	170 PSI (100% C)
10/01/90	3.5 hrs 0 610 F	0	

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## MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8903 Comments: page 5

Materials: HZRB-80

Date	Action	Equip	Results/Comments
10/01/90	16 hrs 0 120 F	Н	
10/02/90	1 hr 0 -100 F	С	***************************************
10/03/90	23 hrs 0 120/150 F	Н	
10/04/90	1 hr 0 -100 F	С	
10/04/90	15 hrs 0 120/160 F	Н	
10/06/90	1 hr 0 487 F	0	
10/08/90	1 hr 0 -100 F	С	
10/08/90	1 hr 0 600 F	C	
10/08/90	20 hrs • 120 F	Н	
10/09/90	1 hr 0 -100 F	Н	
10/10/50	Test (Location 3 C)	A	750 PSI (55% C; 45% F)
10/10/90	1 hr 0 -100 F	C	cracked (no rust under thick coating)

Set: 19 Sample: 8503(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Date	Action	Equip	Results/Comments
06/29/90	2 hrs 0 -120	С	·
06/29/90	Test (Location 2)	٨	100 psi (30% Adhesion, 30% Cohesion, 40% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs 0 600	0	
07/02/90	5 hrs 0 140	Н	
07/12/90	15 min 0 -300	С	Extreme Cold
07/12/90	1 hr 0 -100	С	
07/12/90	16 hrs 0 130	Н	
07/13/90	2 hrs • 620	0	***************************************
07/13/90	17 hrs 0 135	Н	
07/16/90	4 hrs 0 620	0	
07/16/90	3 hrs # 130 F	Ħ	
07/19/90	test (location 4)	Α	900 PSI (90% F; 5% C; 5% dolly)
07/19/90	20 hrs @ 130 F	Н	Very Humid